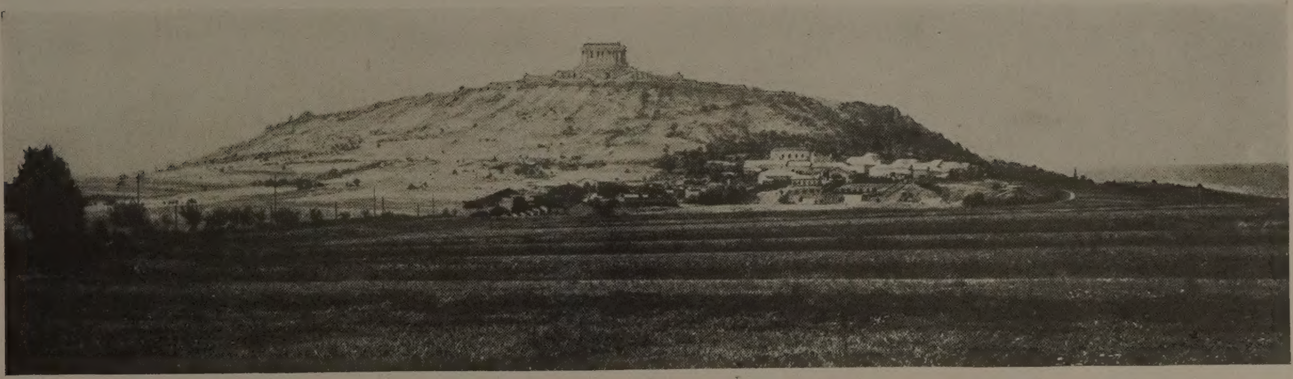
ARCHITECTURE

◆ VOLUME LVI DECEMBER, 1927 NUMBER 6 ◆



A photograph of the site on which Mr. Swartwout has sketched the monument as it will appear

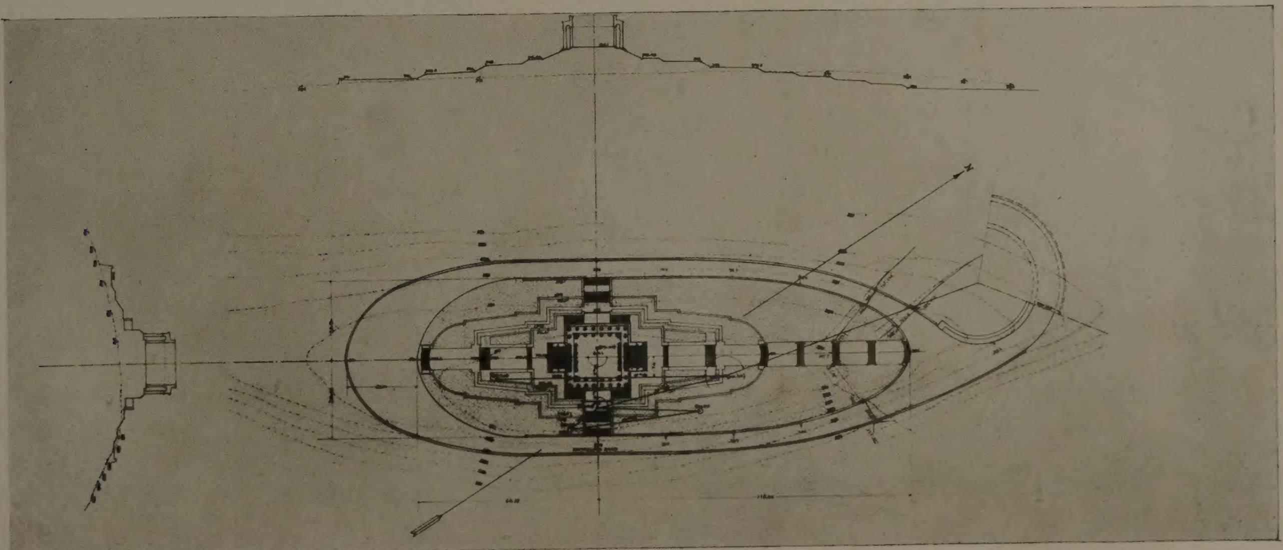
Our War Memorial at Montsec

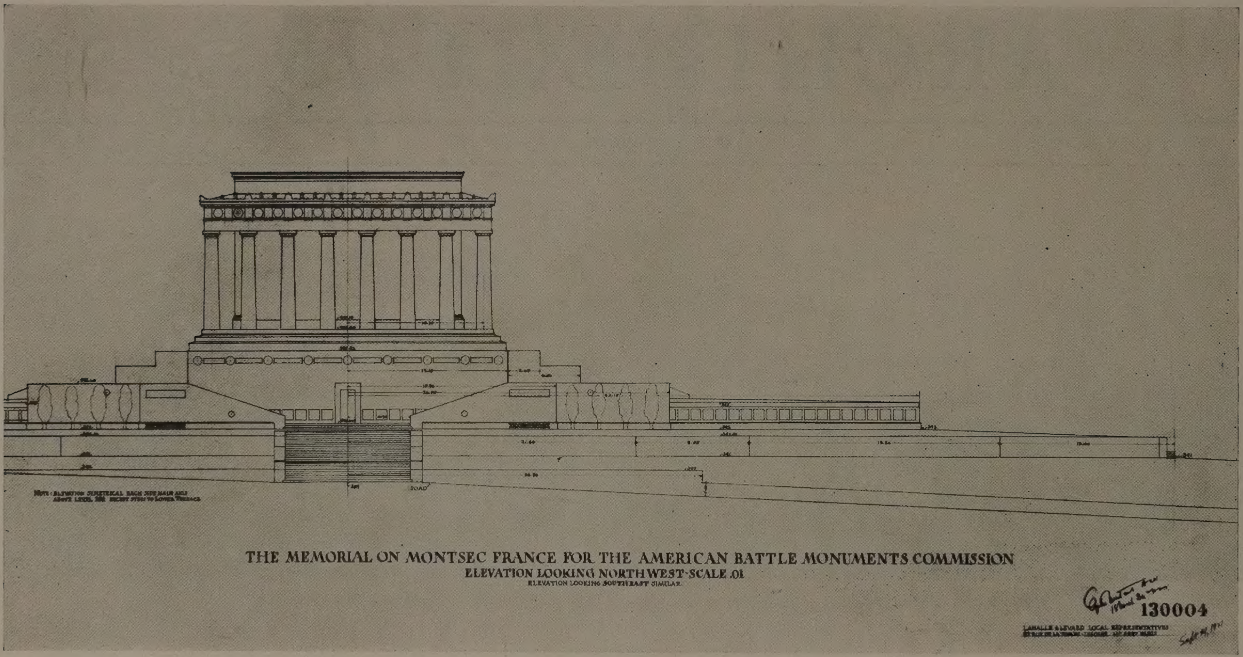
EGERTON SWARTWOUT, Architect

Text and sketches by Gerald K. Geerlings

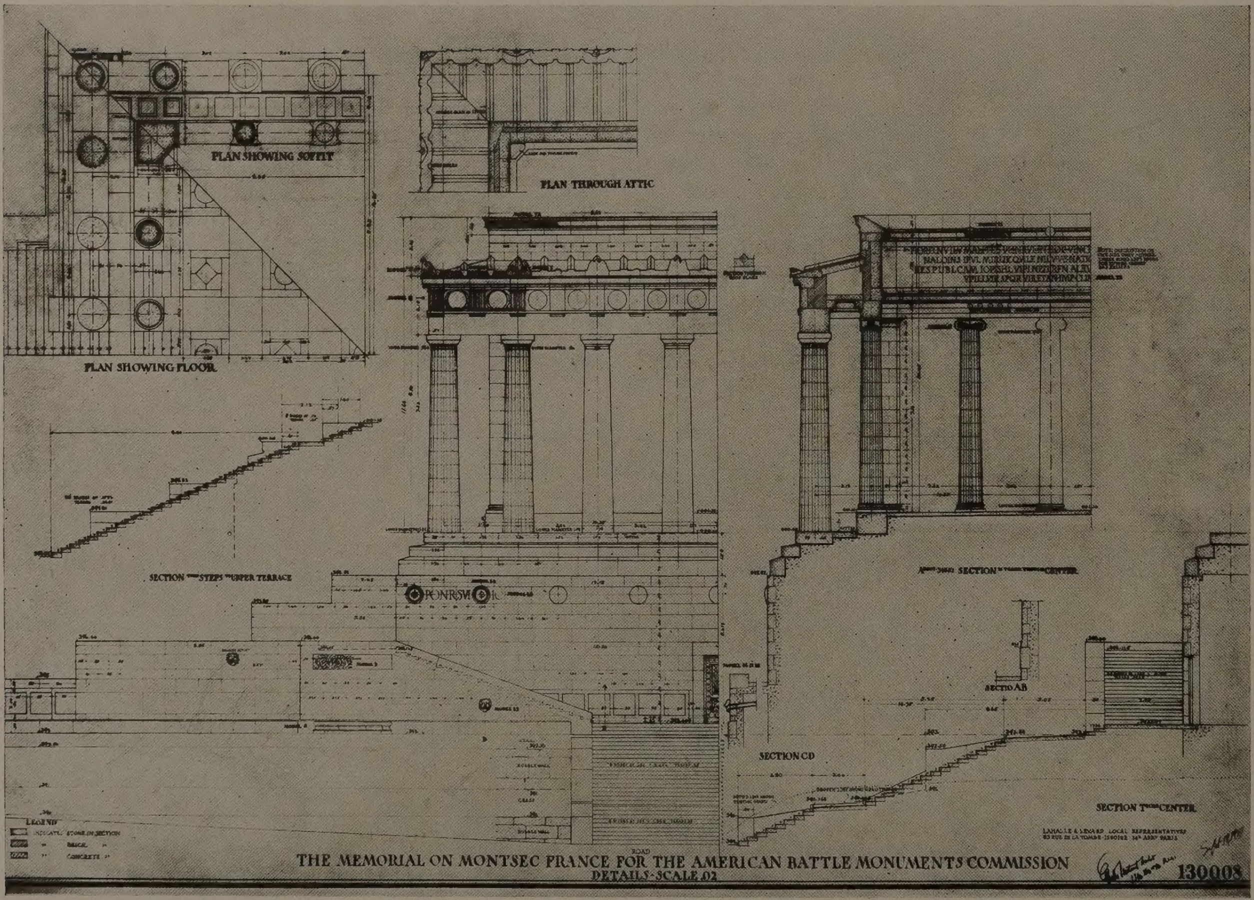
FOR a century before 1914 the little hill of Montsec was one of the many monuments to thrifty French agriculture—a broad patchwork, peacefully overlooking a colorful mosaic of vineyards watered by the meanderings of the Moselle. Eight miles to the west in a direct line dozed the village of St. Mihiel; twenty-four miles distant to the east and a little south buzzed the larger activities of Nancy.

By 1918 Montsec unhappily was playing a new rôle. The stage setting had entirely changed. German military efficiency could point with pride to concrete pillboxes secure enough safely to shelter even the Kaiser. Barbed wire grew as plentiful a harvest as ever did the erstwhile vineyard trellises. To the west lay St. Mihiel, fallen prey to "Der Tag"; to the southeast couched Nancy, still in allied hands. Up to September 11 the new actors could survey their handiwork with complacence; they could exult that gradually increasing the salient during the preceding four years was




ROAD
THE MEMORIAL ON MONTSEC FRANCE FOR THE AMERICAN BATTLE MONUMENTS COMMISSION
ELEVATION LOOKING NORTHWEST·SCALE .01
ELEVATION LOOKING SOUTHEAST SIMILAR
130004
LAHALLE & LEVARD LOCAL REPRESENTATIVES

Elevation looking northwest


PLAN SHOWING SOFFIT
PLAN THROUGH ATTIC
PLAN SHOWING FLOOR
SECTION THRU STEPS TO UPPER TERRACE
SECTION THRU CENTER
SECTION AB
SECTION CD
SECTION THRU CENTER
LEGEND
INDICATES STONE IN SECTION
" BRICK "
" CONCRETE "
ROAD
LAHALLE & LEVARD LOCAL REPRESENTATIVES
THE MEMORIAL ON MONTSEC FRANCE FOR THE AMERICAN BATTLE MONUMENTS COMMISSION
DETAILS·SCALE .02
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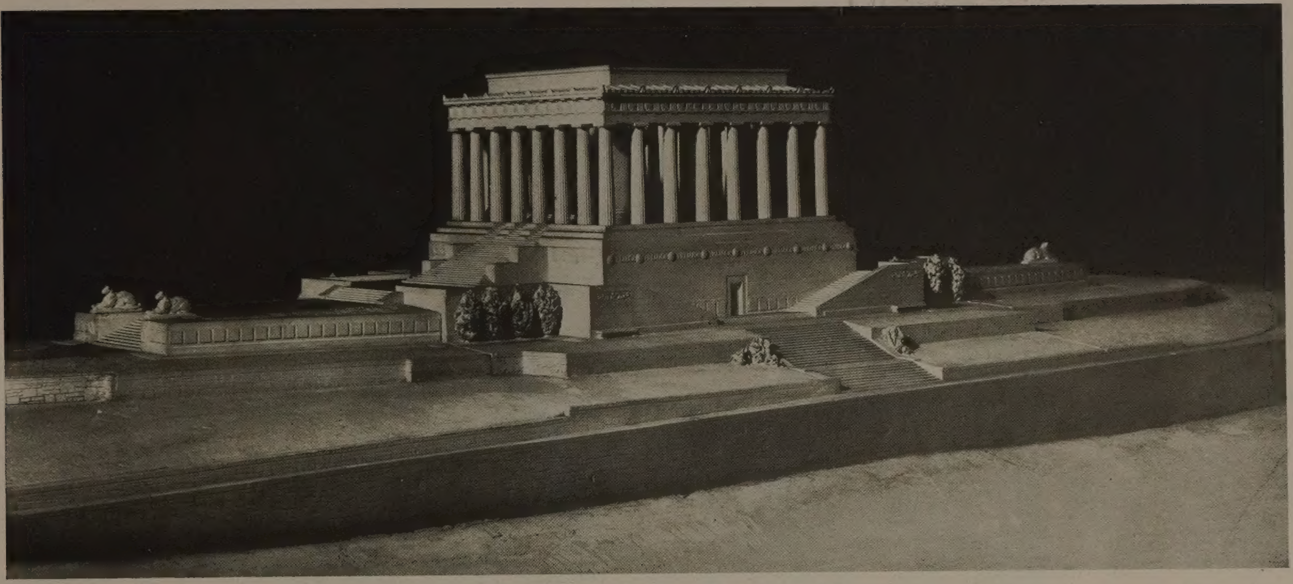
Scale details



A photograph of the small-scale model

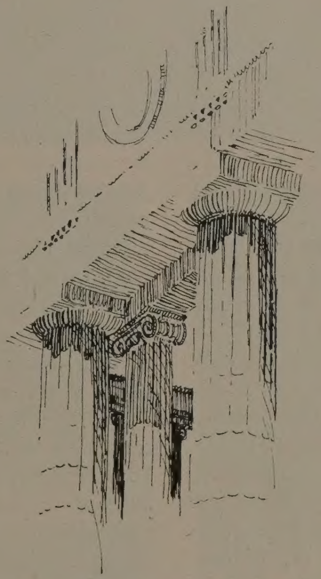
more and more a painful and permanent threat to the Allies, and a monument to their own military achievement.

Came the unforeseen "Tag" when on September 12, 1918, the curtain went up under no orders from the Potsdam management. During the next two days the French and American divisions successfully dramatized their own plot and moved the stage toward Berlin until the salient was no more. Again Montsec was peaceful. High-air-burst soundings and barages were stilled. American troops had executed their second major operation of the World War, and the hill which for so long had unwillingly witnessed their sorry mud and stealthy movements now became an eloquent monument of blasted German pillboxes.

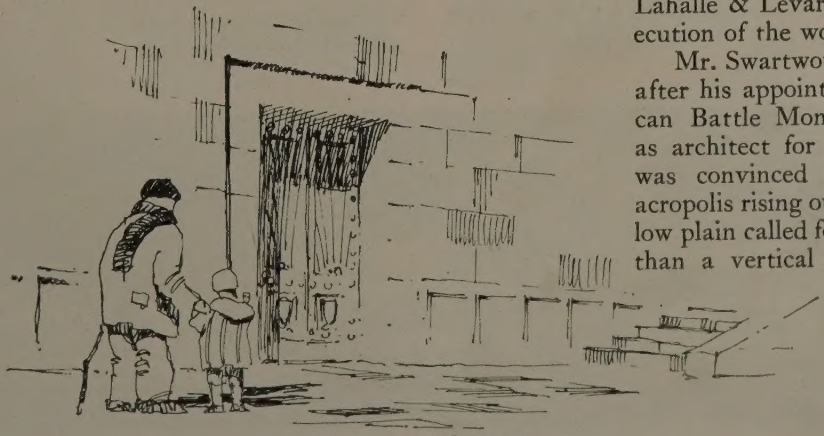
Ten years have passed, and the hill of Montsec is about to be surmounted by an American memorial.

The American Battle Monuments Commission in its programme for memorials in France decided that three main monuments would be erected on the sites of the three major American operations. The Meuse-Argonne is rated first in importance, the St. Mihiel salient second, and Chateau-Thierry third. Five minor ones will commemorate lesser engagements. Both French and Belgium governments have consented to approve monuments only after they have passed the American Commission. This was done as a precaution against memorials which might be in excess of their importance or in poor taste, either of which might lead the spirit of their commemoration to be misunderstood by the French. Outside of the three major and five minor monuments marking the sites of principal American engagements, all other expressions must be of a useful nature to the inhabitants of the district, such as public buildings, fountains, bridges, and the like. Appointments of the architects for the various monuments were made directly by the Commission. On the Montsec memorial Mr. Egerton Swartwout was appointed architect, and he has associated with him Messrs. Lahalle & Levard, Paris, for the execution of the work.

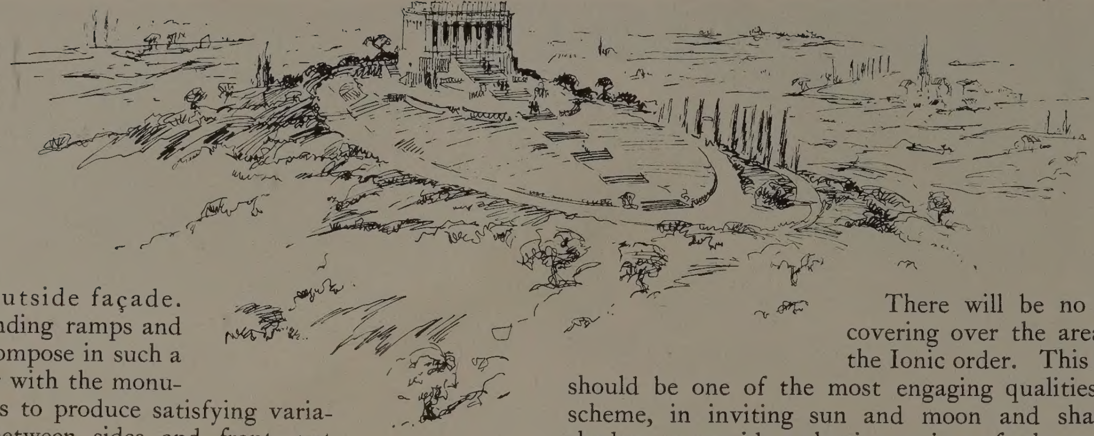
Mr. Swartwout visited the region after his appointment by the American Battle Monuments Commission as architect for the monument, and was convinced that the elongated acropolis rising out of the surrounding low plain called for a horizontal rather than a vertical solution. After deliberate study he arrived at an interesting version of the Propylea, square with eight Doric columns on



The effect of raising the inside order upon a level higher than the outside Doric one



A doorway to the crypt



each outside façade. Surrounding ramps and steps compose in such a manner with the monument as to produce satisfying variations between sides and front, yet maintain the long axis of the ensemble coincident with the shape of the hill.

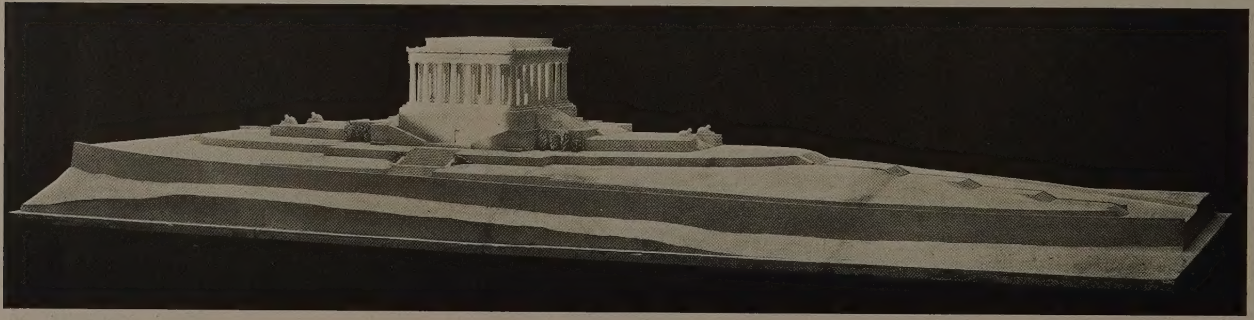
Mr. Swartwout's solution incorporates a number of thoughtful considerations applicable to other architectural problems. For one thing, the double columniation is so studied that the visitor approaching the monument, and seeing the column capitals from any of the lower levels, will not feel that the inner capitals are lower than the outer ones. Usually when double columns of equal height are employed the optical illusion created is that the architrave soffits of the inner row are lower than those of the outside. The working-drawing section illustrated shows that the outer Doric order has both base and capital one step lower than the inner Ionic order. When studying the model from any of the lower terraces the views obtained are peculiarly satisfying, and make one wish that the Greek precedent of the Propylea had more adherents.

Another feature of note is that the inner Ionic columns, in order to maintain the same centring as the larger exterior Doric ones, have a pier at the corner. The latter is splayed on the inside at 45 degrees (see plan detail), which not only offers an easy transition from one side of the colonnade to the one adjacent, but forms a natural base for a sculptural figure above the cornice. The latter is not shown on the illustrated drawing, but occurs in the model. The inner attic will have an inscription opposite the main approach, while on the other three sides sculptural bas-reliefs will be carved from the stone. Sketches for all sculptural work are now being prepared by James Earle Fraser.

There will be no roof or covering over the area inside the Ionic order. This in itself should be one of the most engaging qualities of the scheme, in inviting sun and moon and shade and shadow, to provide a pleasing variety of color and vistas from both distant and intimate station points.

The materials will be confined to concrete for the foundations and crypt, rubble for the outer retaining walls, and, for the monument proper, local limestone having warmth of color and variety of texture. For the time being the vaulted concrete crypt will be left unfinished, but if at any future date it is desired to provide for a museum-relic hall, it can readily be adapted.

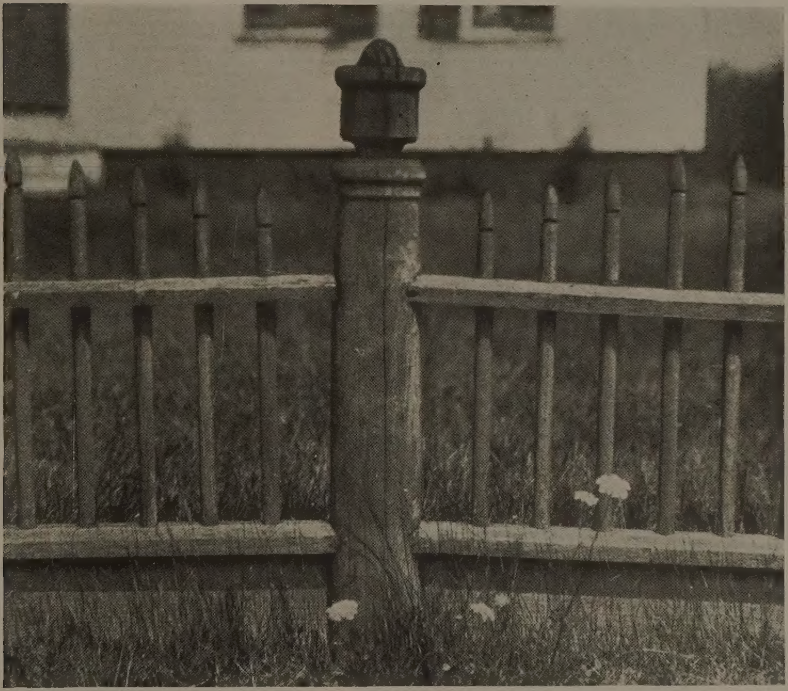
Since the monument is to be executed by French workmen, the scale on the plans is in the sensible metric system—to which we shall all come one day—which for practical conversion can be changed into feet by multiplying by $3\frac{1}{12}$. The Doric columns are just under 1 m. at the necking and 1.2 at the base; the corner column is a trifle larger than the others, and is 2.8 m. on centre from the adjacent column; all other columns are 3.02 on centre. These outer columns are 7.32 m. in height, or just under 24 feet. The inner Ionic columns are .725 m. at the necking and .87 at the base. From the top of the attic to the base of the second retaining wall is about 70 feet. The podium is about 80 feet on a side. Inclusive of the outer steps in the narrow way of the hill, it is 190 feet, while in length, also inclusive of outer steps, it is 450 feet. The attic, floor, terraces, steps, etc., are so pitched as to make the drainage simplicity itself; wherever weep-holes pierce a wall they are so arranged that they may be easily cleaned with a straight stick. Mr. Swartwout has arranged his levels so that the cut and fill at the site will balance each other.

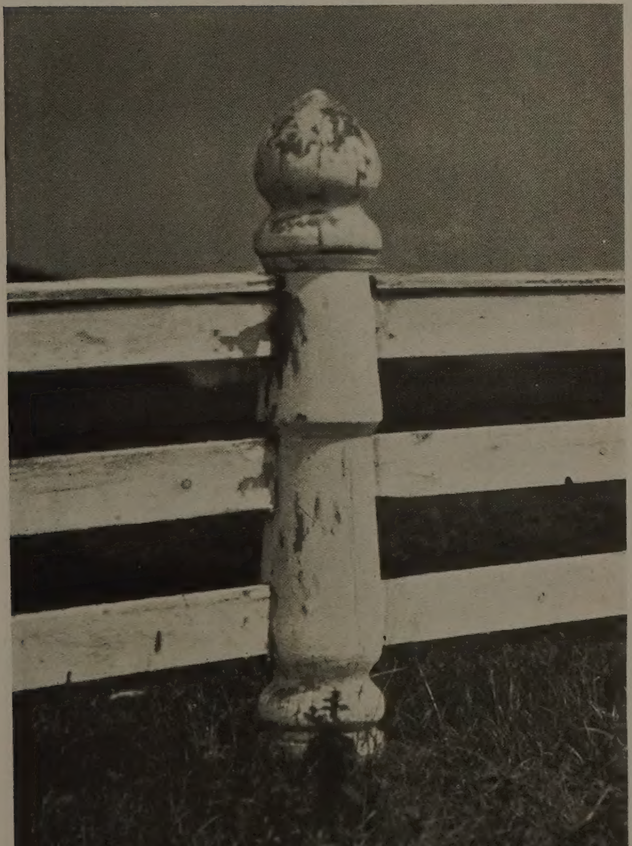


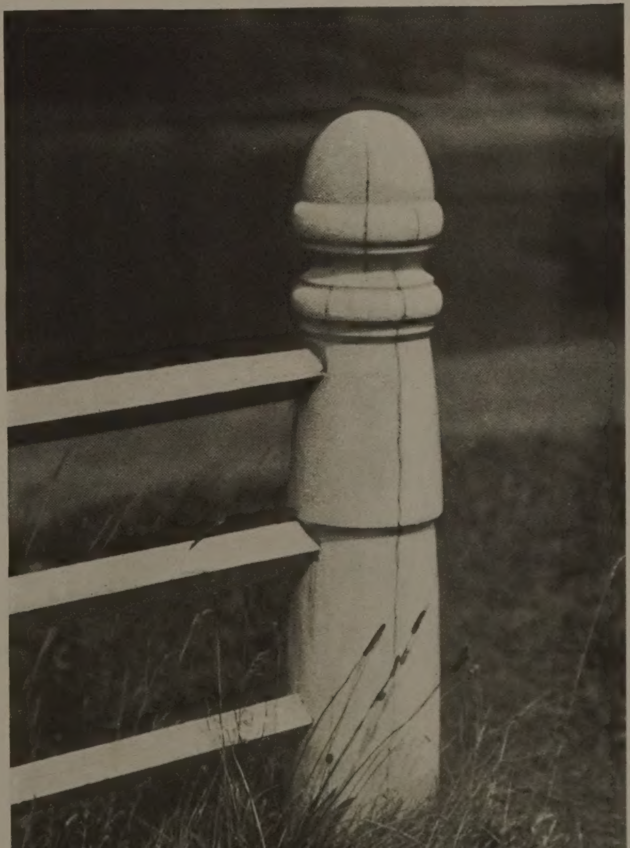
Fence-Posts of Old Cape Cod

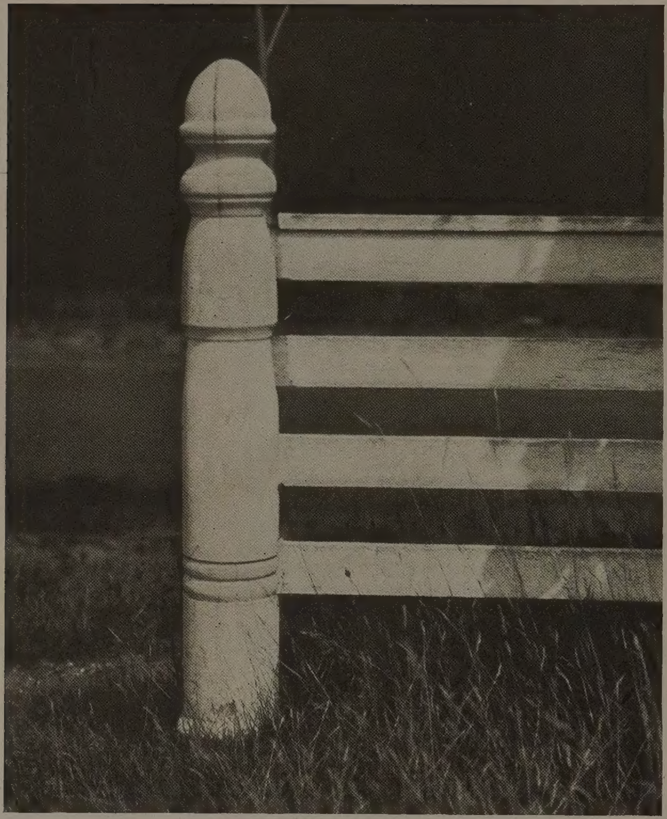
A Series
of
Photographs

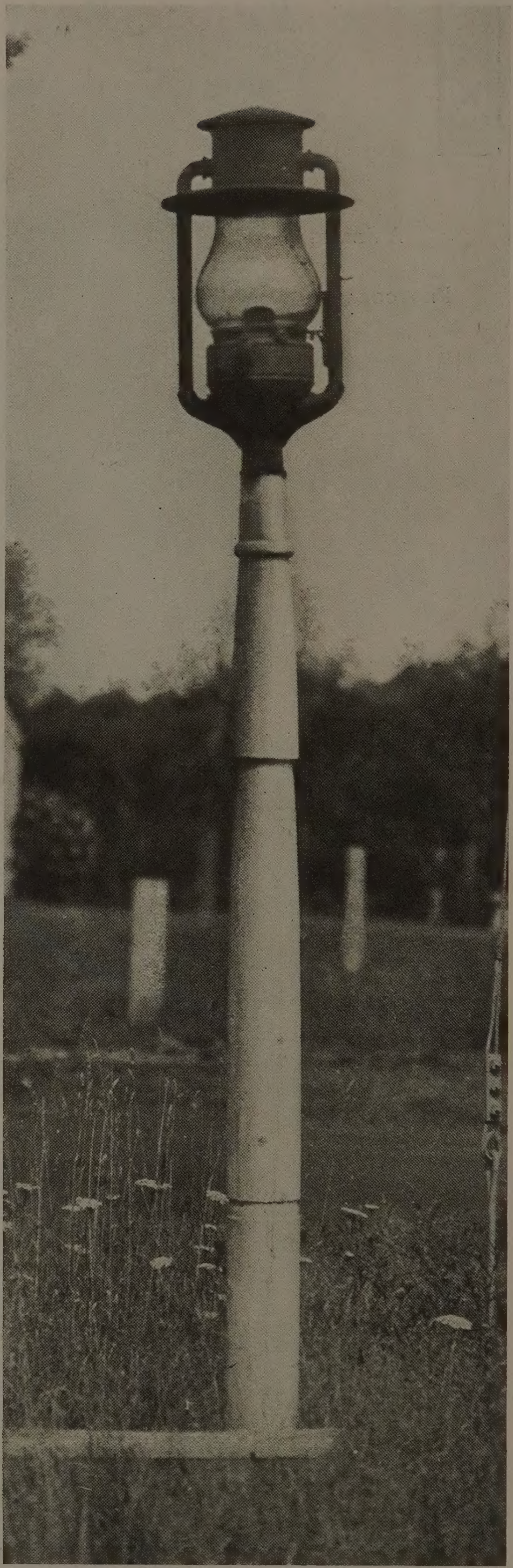
by George
H.
Van Anda

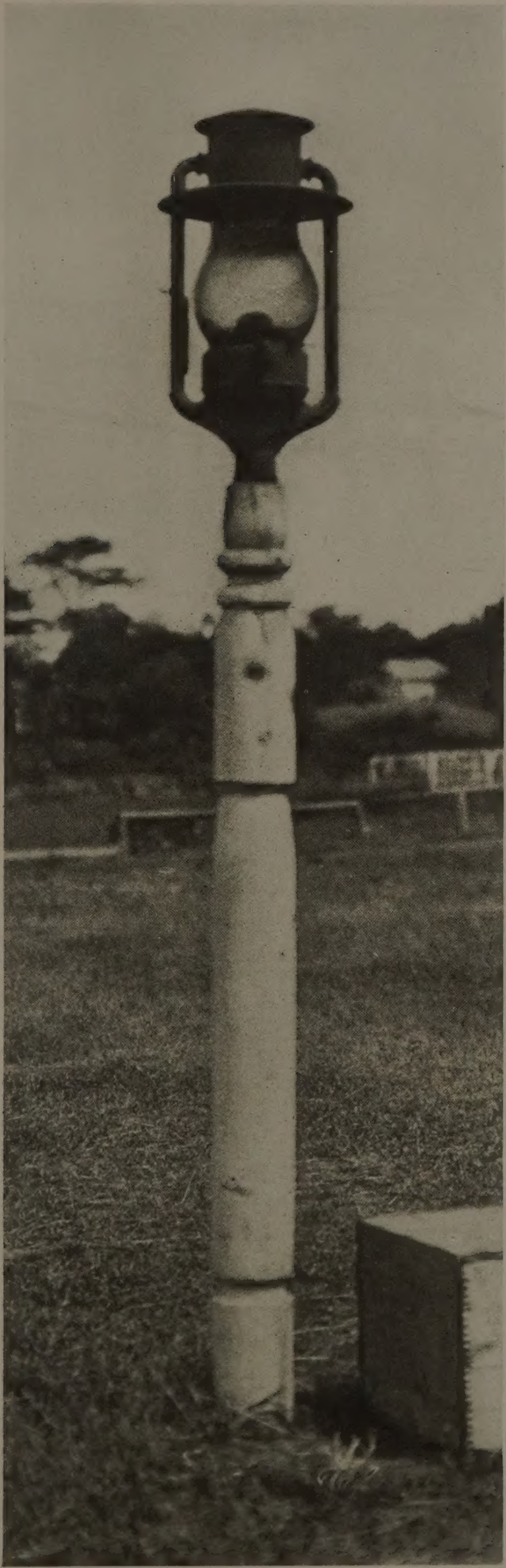


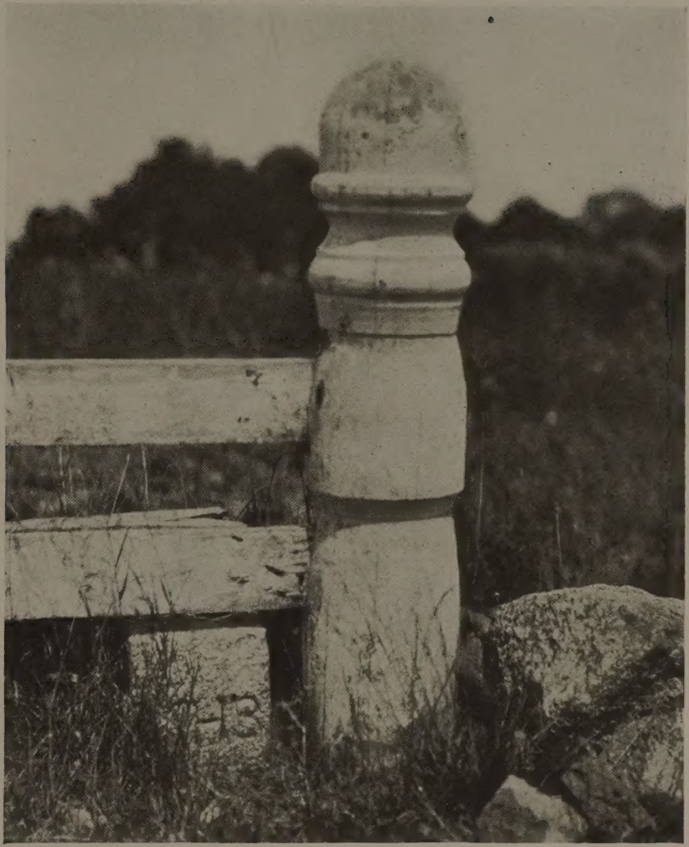


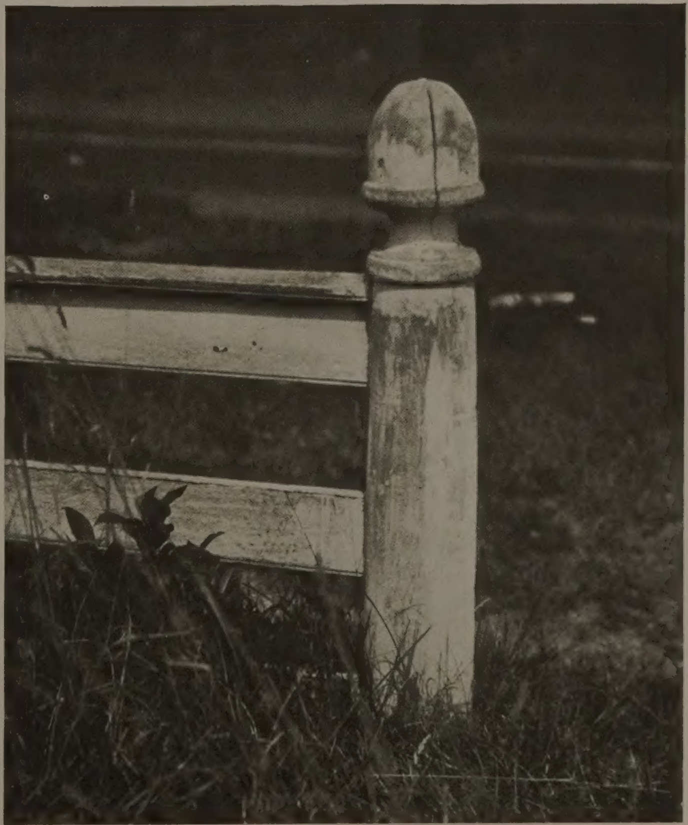


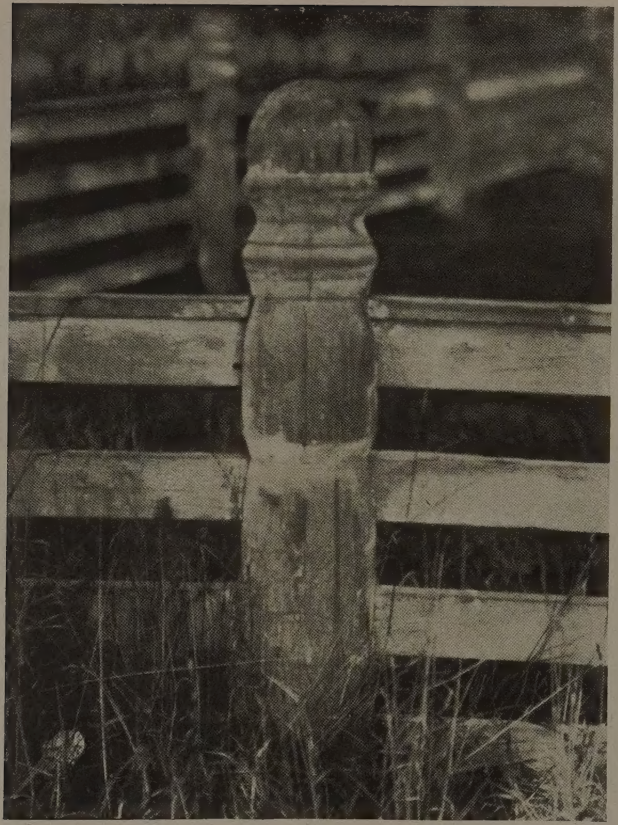


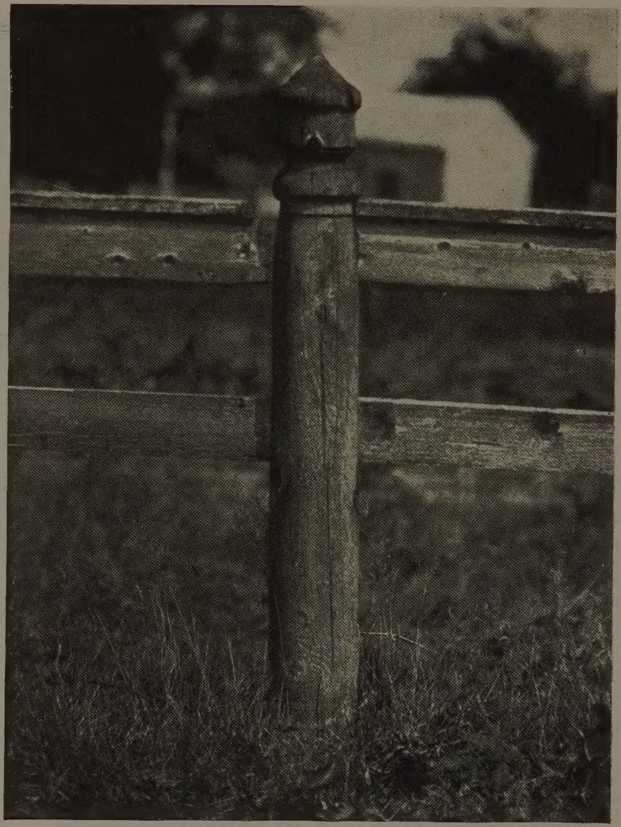


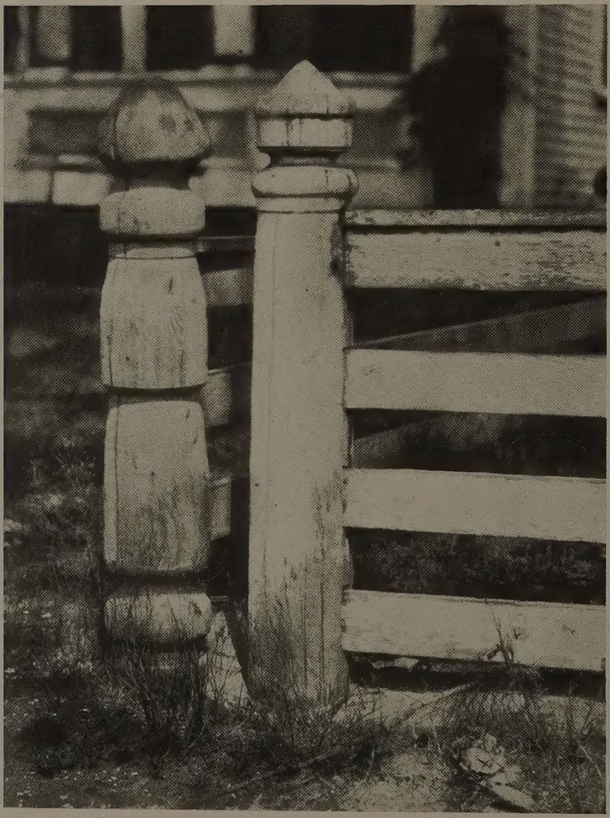


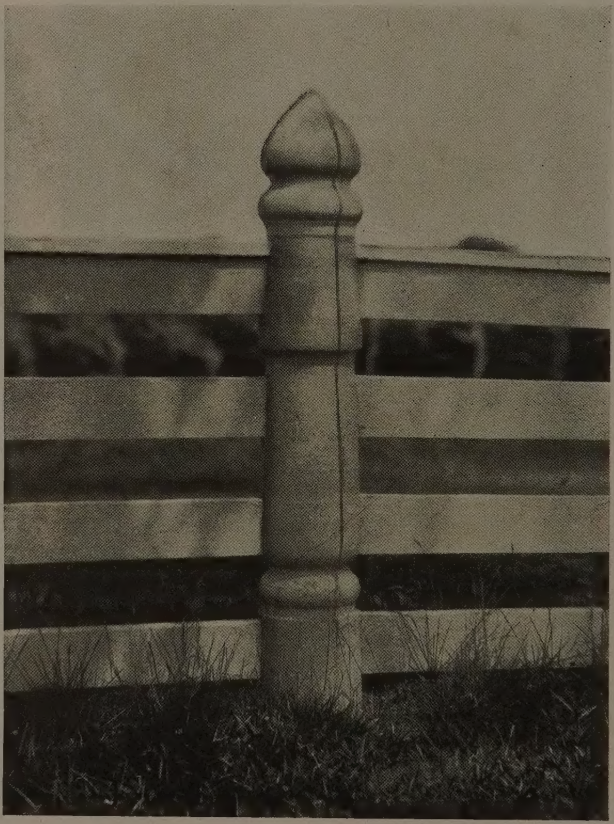


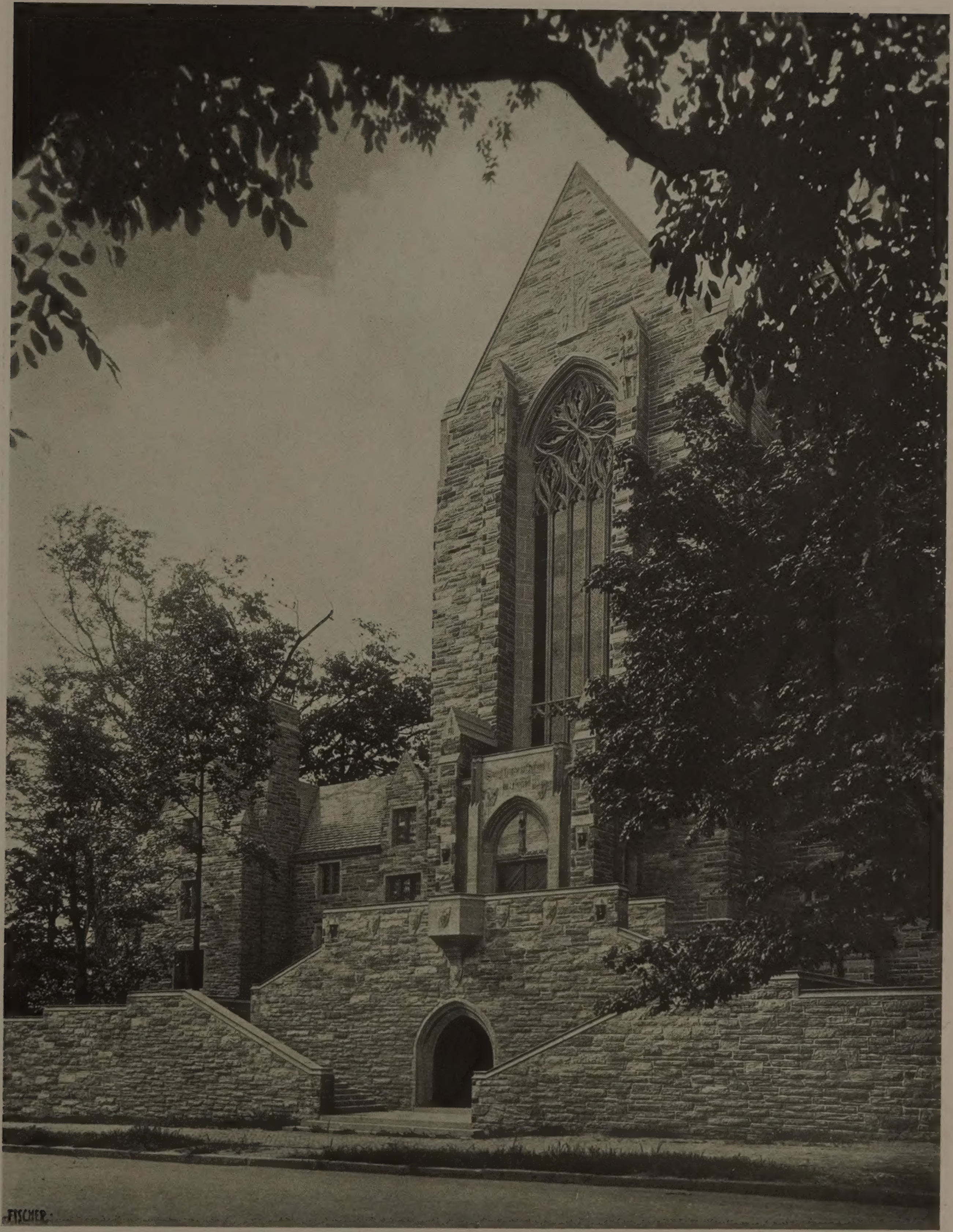




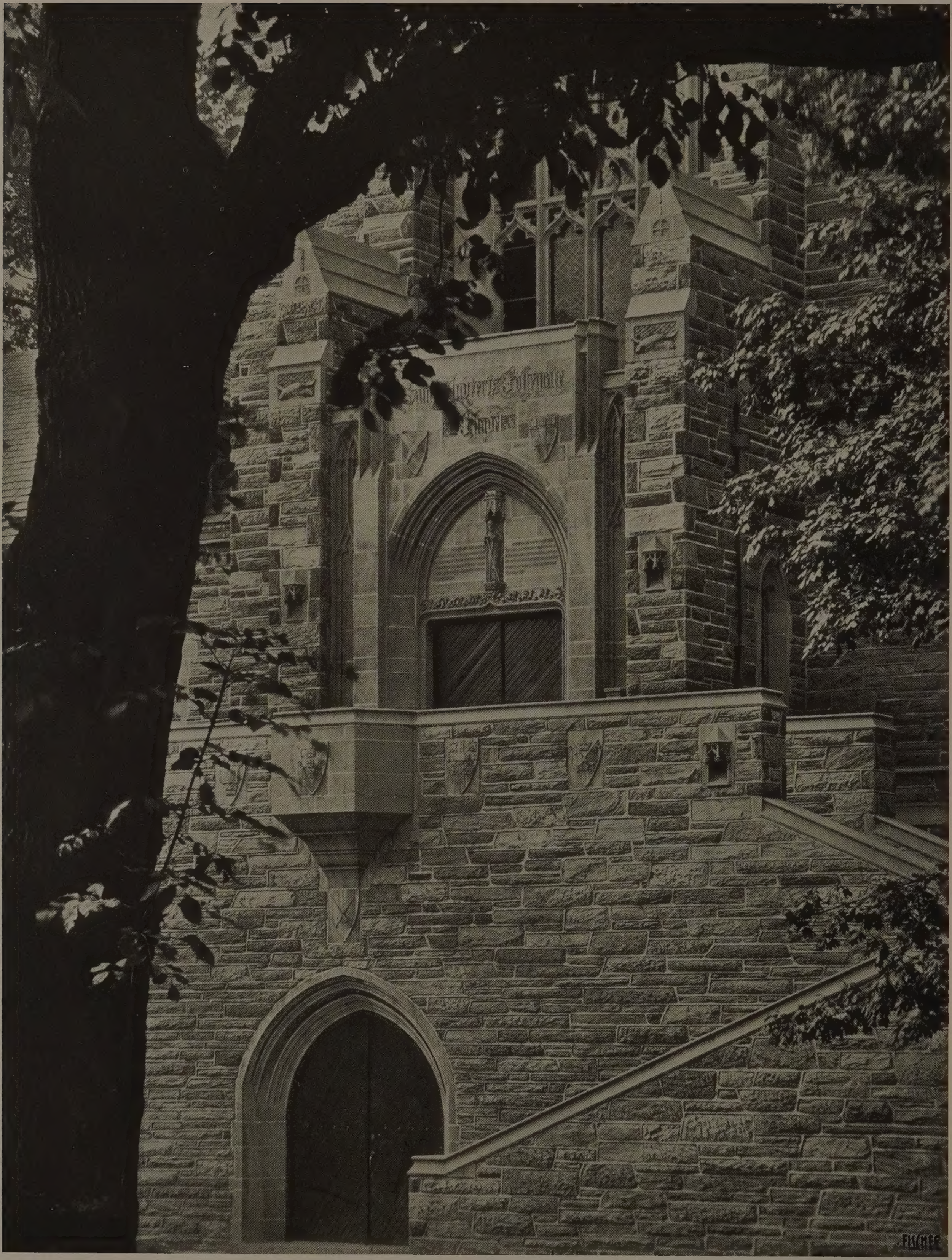




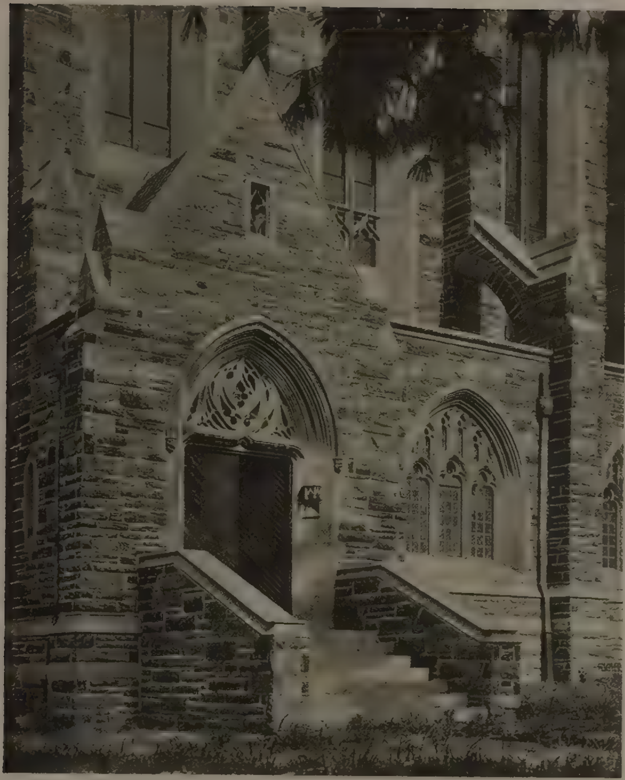


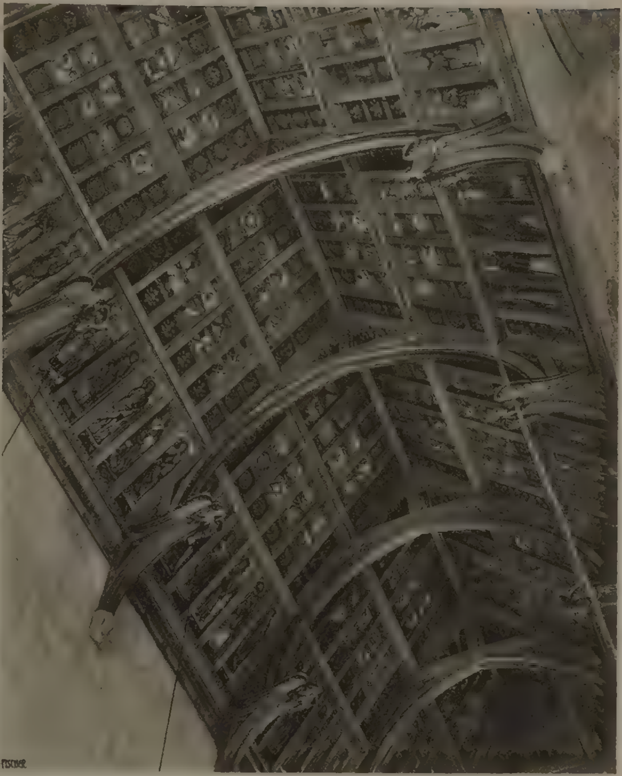


St. Andrew's Collegiate Chapel and Deanery, Philadelphia, Pa.
ZANTZINGER, BORIE & MEDARY, ARCHITECTS



St. Andrew's Collegiate Chapel and Deanery, Philadelphia, Pa.
ZANTZINGER, BORIE & MEDARY, ARCHITECTS

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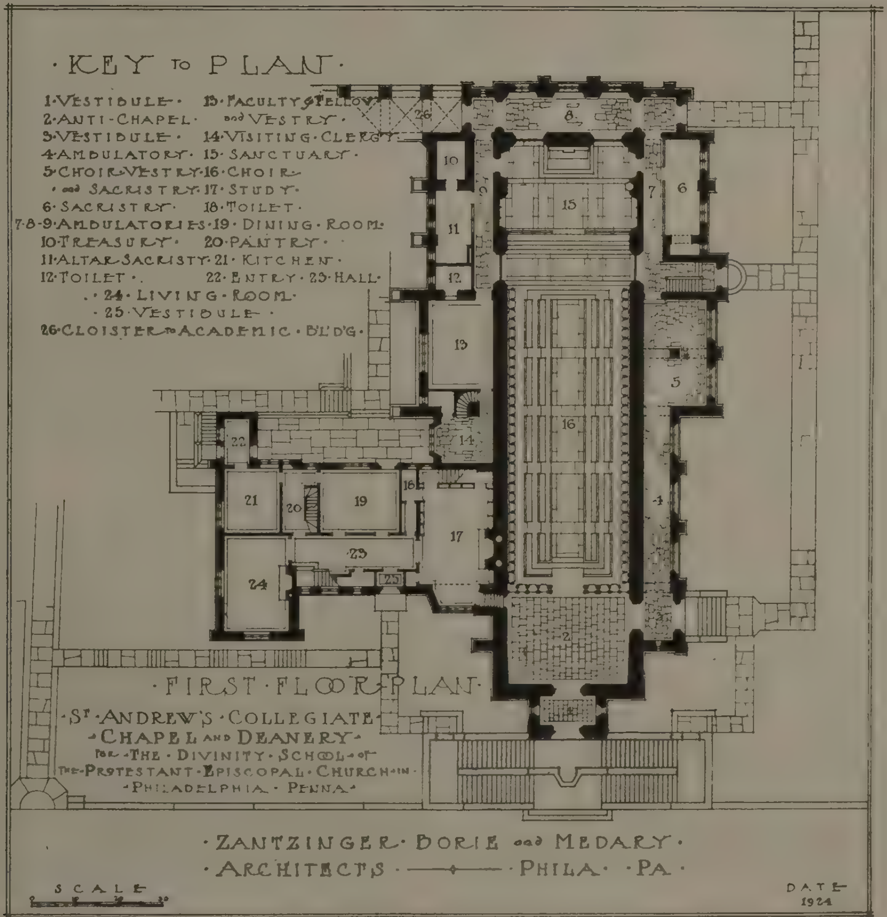
·KEY TO PLAN·
1·VESTIBULE·
2·ANTI-CHAPEL·
3·VESTIBULE·
4·AMBULATORY·
5·CHOIR-VESTRY and SACRISTRY·
6·SACRISTRY·
7·8·9·AMBULATORIES·
10·TREASURY·
11·ALTAR-SACRISTY·
12·TOILET·
13·FACULTY & FELLOW and VESTRY·
14·VISITING·CLERGY·
15·SANCTUARY·
16·CHOIR·
17·STUDY·
18·TOILET·
19·DINING·ROOM·
20·PANTRY·
21·KITCHEN·
22·ENTRY·
23·HALL·
24·LIVING·ROOM·
25·VESTIBULE·
26·CLOISTER TO ACADEMIC·BL'D'G·
·FIRST·FLOOR·PLAN·
·ST·ANDREW'S·COLLEGIATE·
·CHAPEL AND DEANERY·
FOR·THE·DIVINITY·SCHOOL·OF
THE·PROTESTANT·EPISCOPAL·CHURCH·IN·
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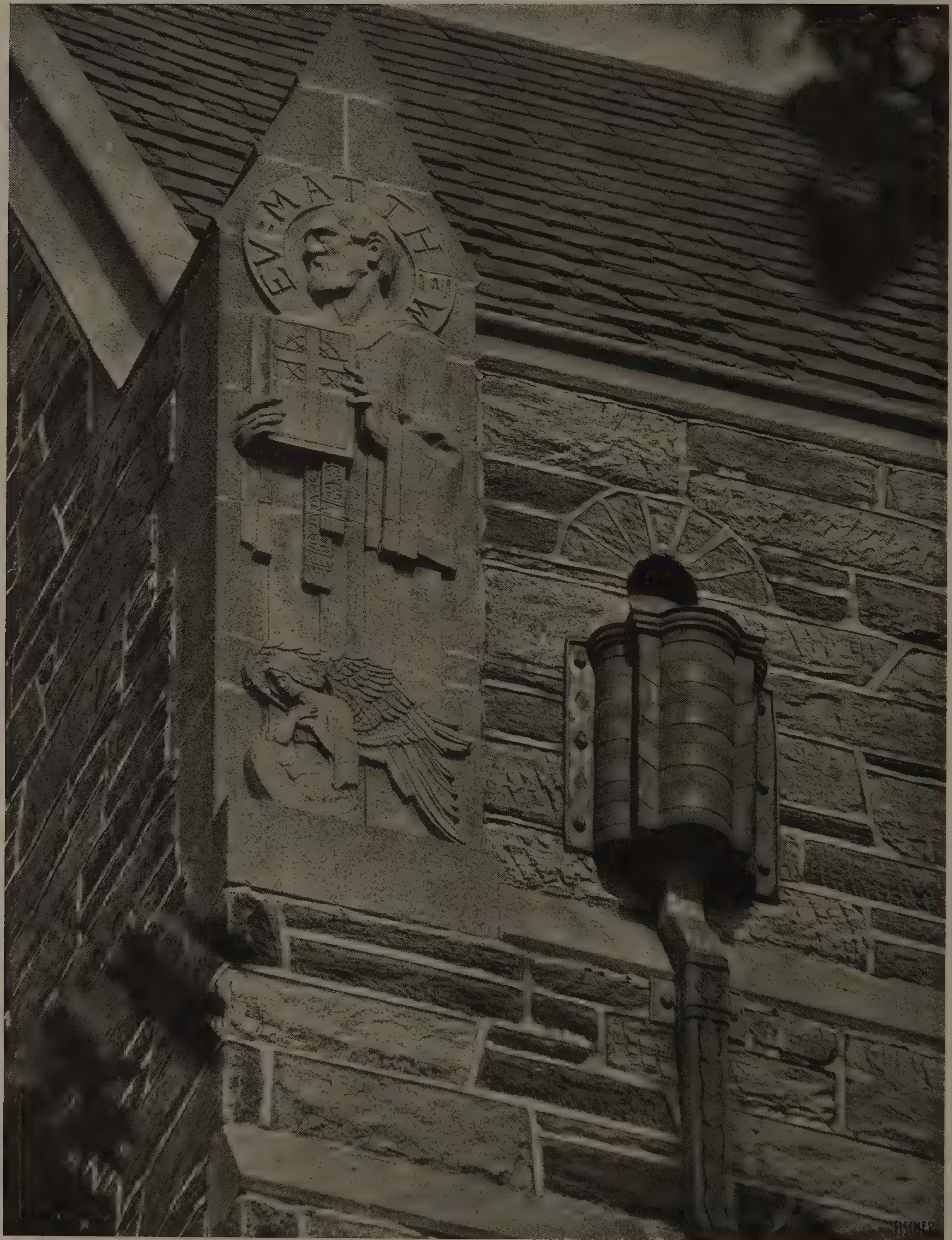
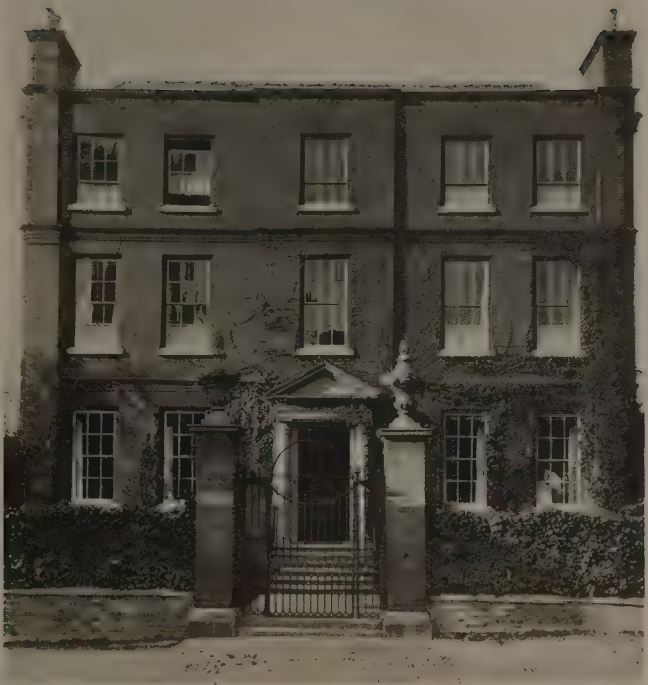


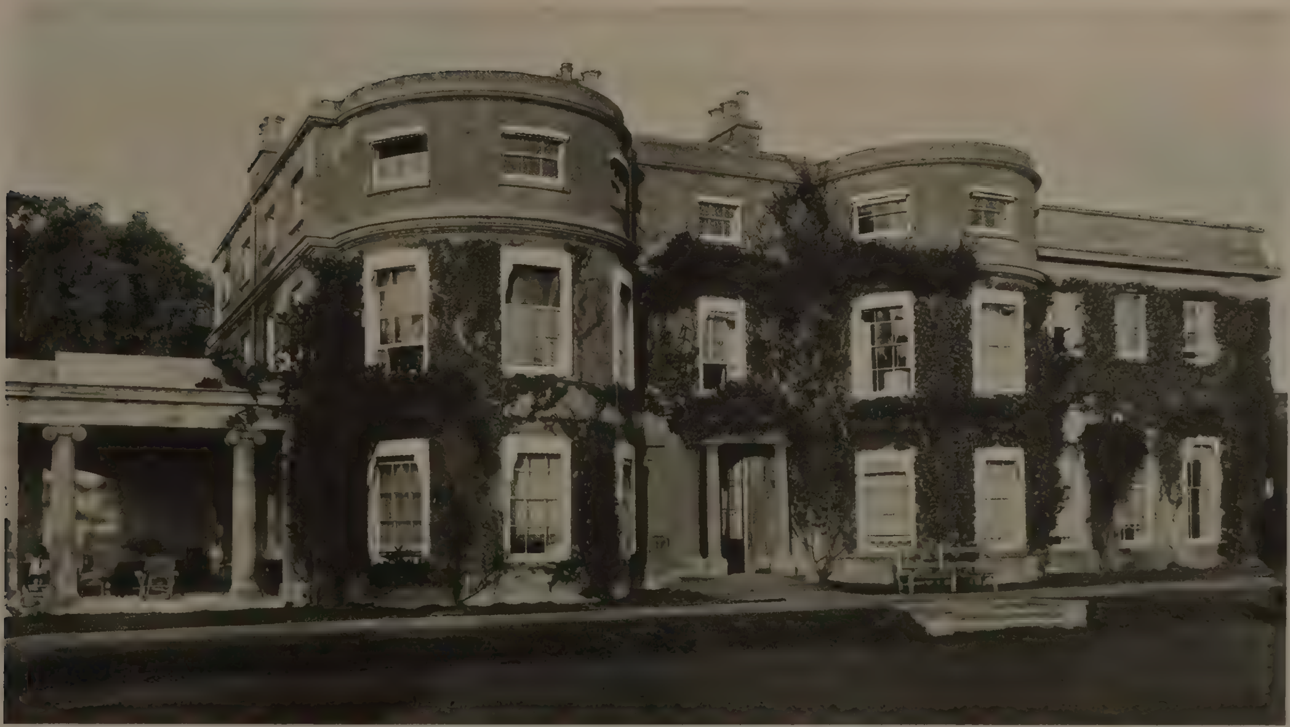
St. Andrew's Collegiate Chapel and Deanery, Philadelphia, Pa.
zantzinger, borie & medary, architects

Parapets in Lieu of Eaves

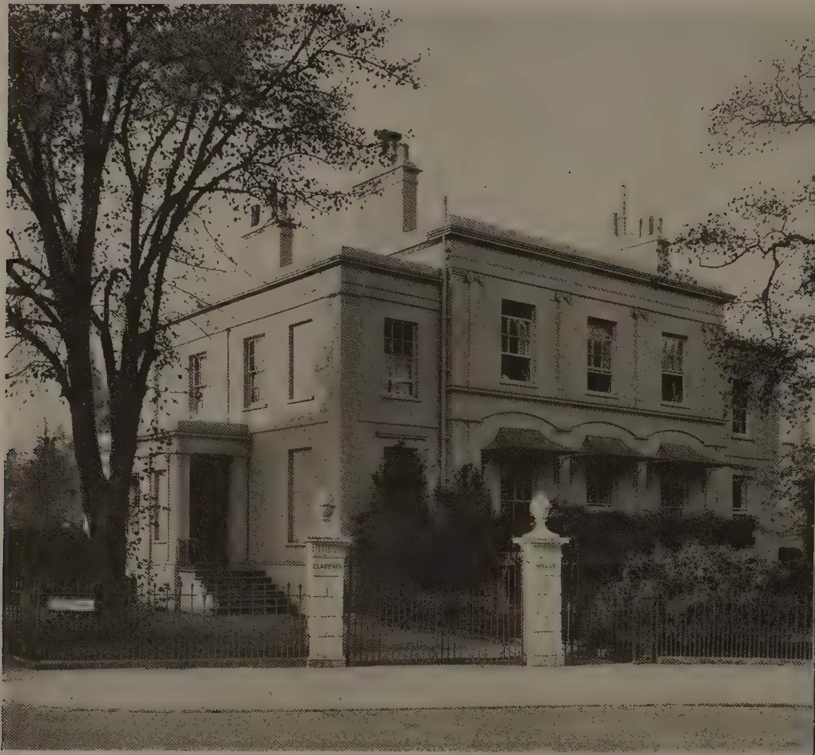
Possibly it has been the fear of being unable to make our roofs watertight, perhaps it has been merely a matter of taste; whatever the reason for it, we have seldom until quite recently borrowed from the English the parapet type for the country or suburban house. Yet there are plenty of interesting examples to be found, a representative selection from which is presented herewith, from photographs by Harold Donaldson Eberlein.



Miller's Green, the Close, Gloucester. Circa 1745

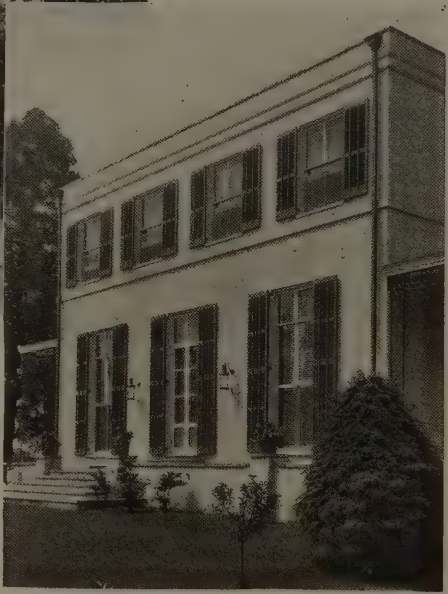


Wormington Grange, Gloucestershire. Circa 1810

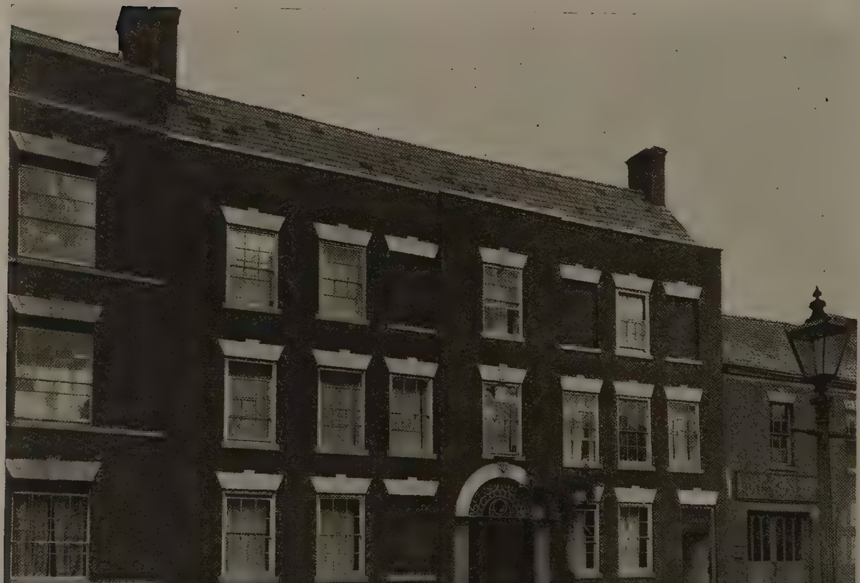


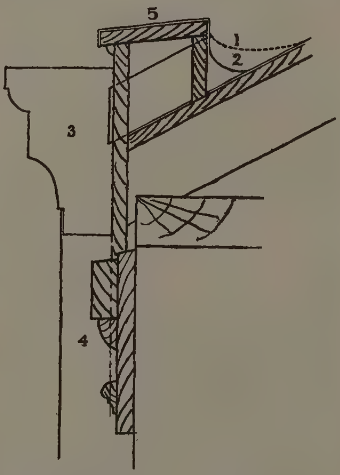
House in Cheltenham, Gloucestershire. Circa 1828

An American adaptation, Kenwood, Bethayres, Pa. Remodelled and enlarged. Leigh French, Jr., Architect; H. D. Eberlein, Associated



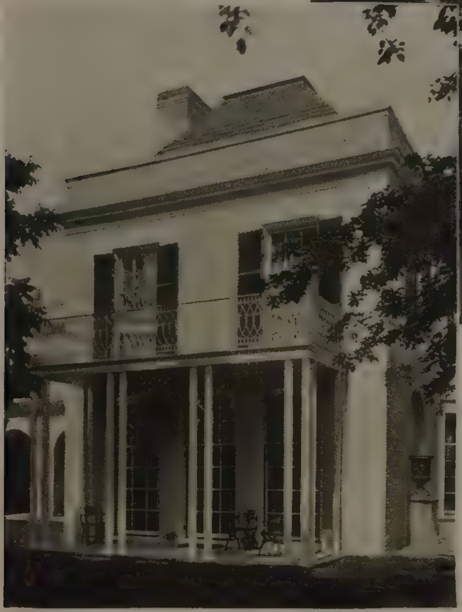
Brick house in Pershore, Worcestershire. Circa 1755

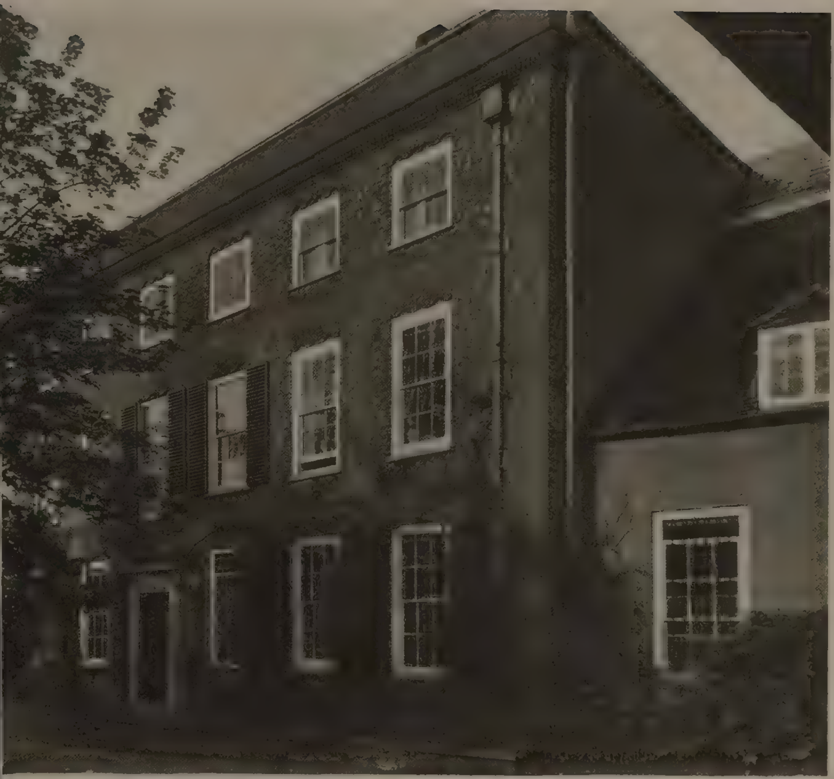




Kenwood, as above. In altering the house the parapet replaced a cornice. Section showing parapet and gutter: 1 and 2, high and low points of gutter; 3, rain-conductor head; 4, leader; 5, top of parapet

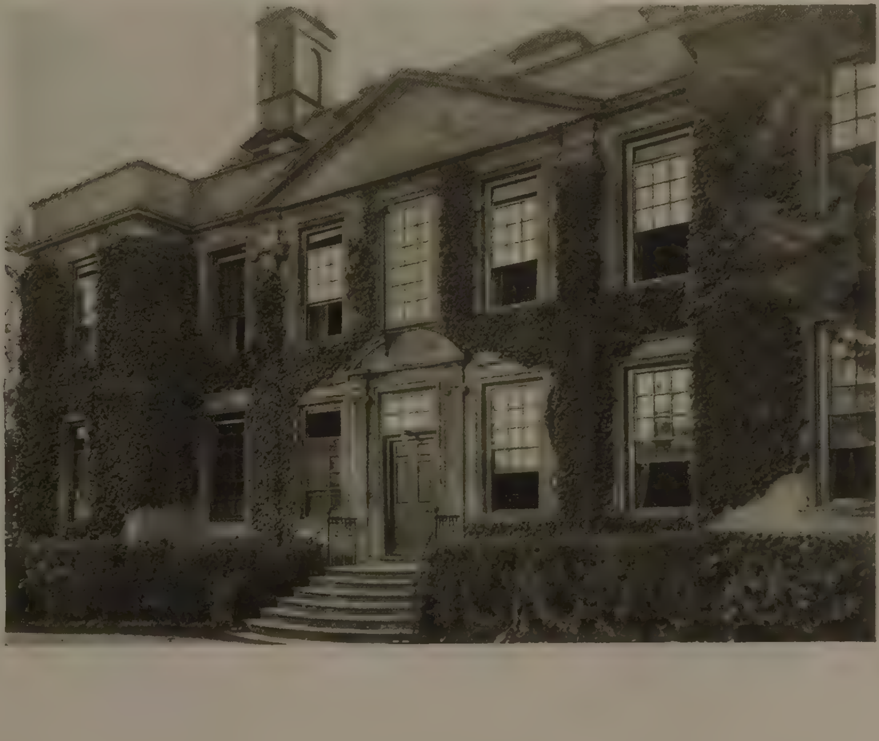
Another recent adaptation —Waref, Purchase, N. Y. Leigh French, Jr., Architect

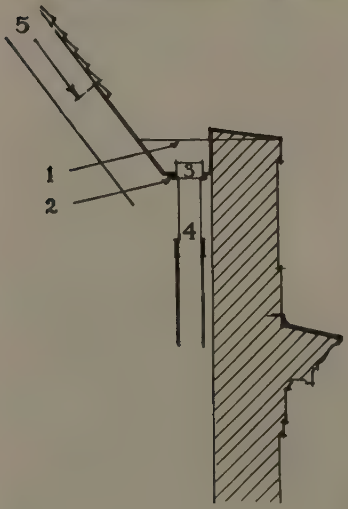




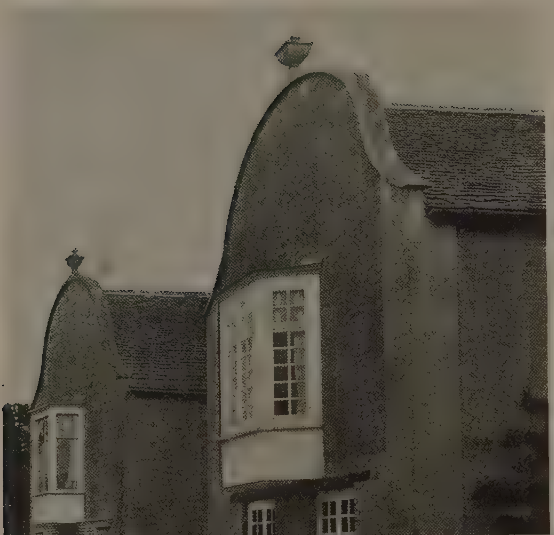
Dynevor House, Ampthill, Bedfordshire. Circa 1728

Great House, Bourton-on-the-Hill, Gloucestershire. Refronted circa 1700

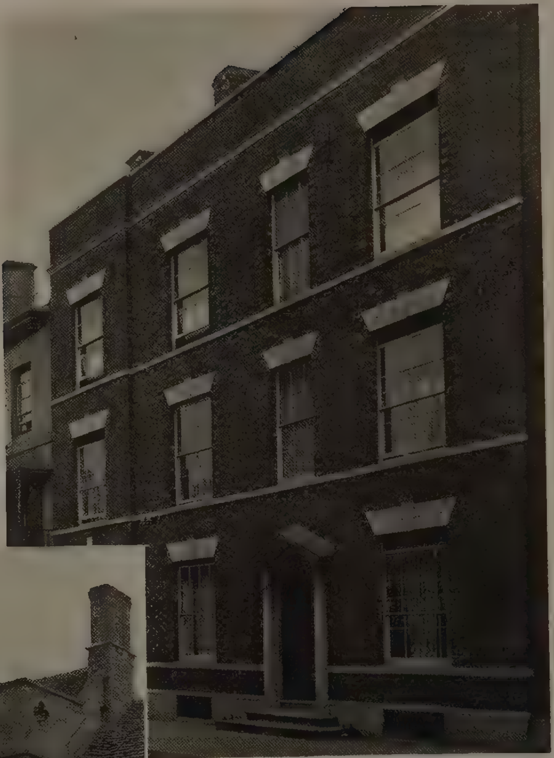




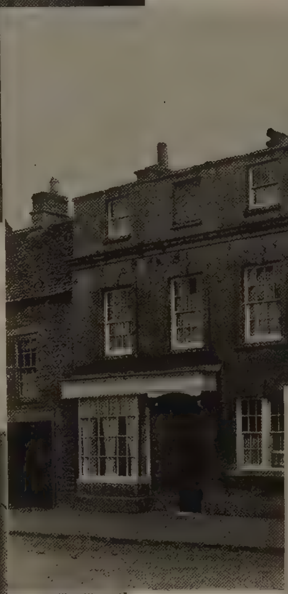
Waref, as above. Section through parapet and gutter: 1 and 2, high and low points of gutter; 3, perforated brass screen cap; 4, leader (inside of wall); 5, extent of flashing



Small houses in Burford, Oxfordshire. Circa 1690

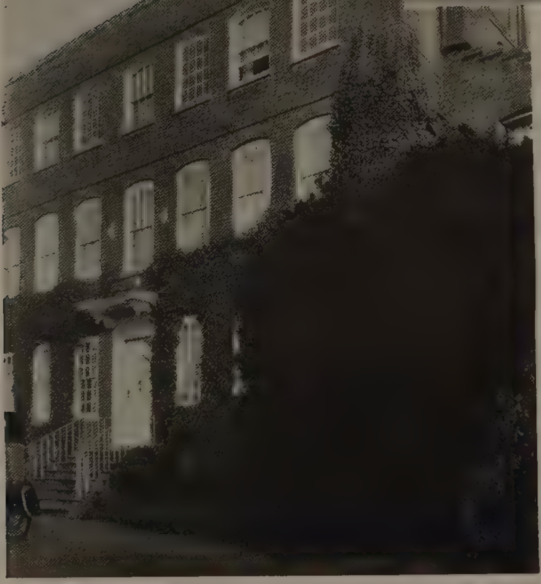


Brick house in Pershore, Worcestershire. Circa 1760

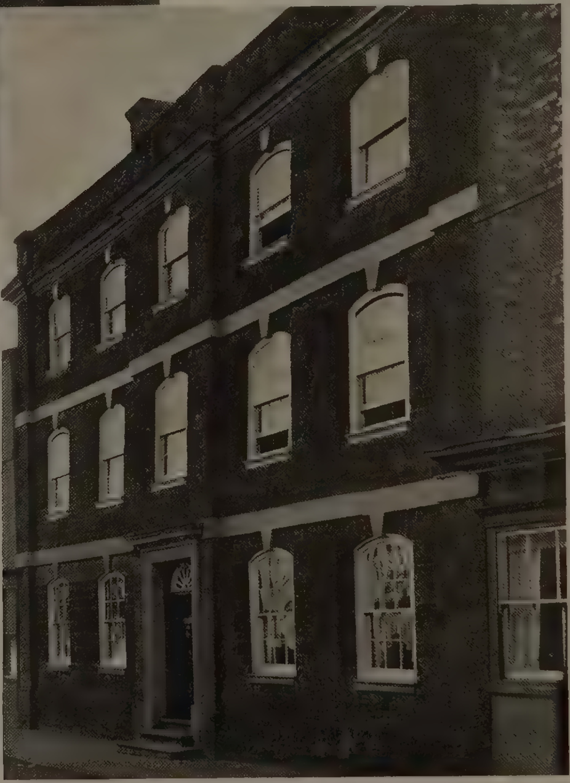


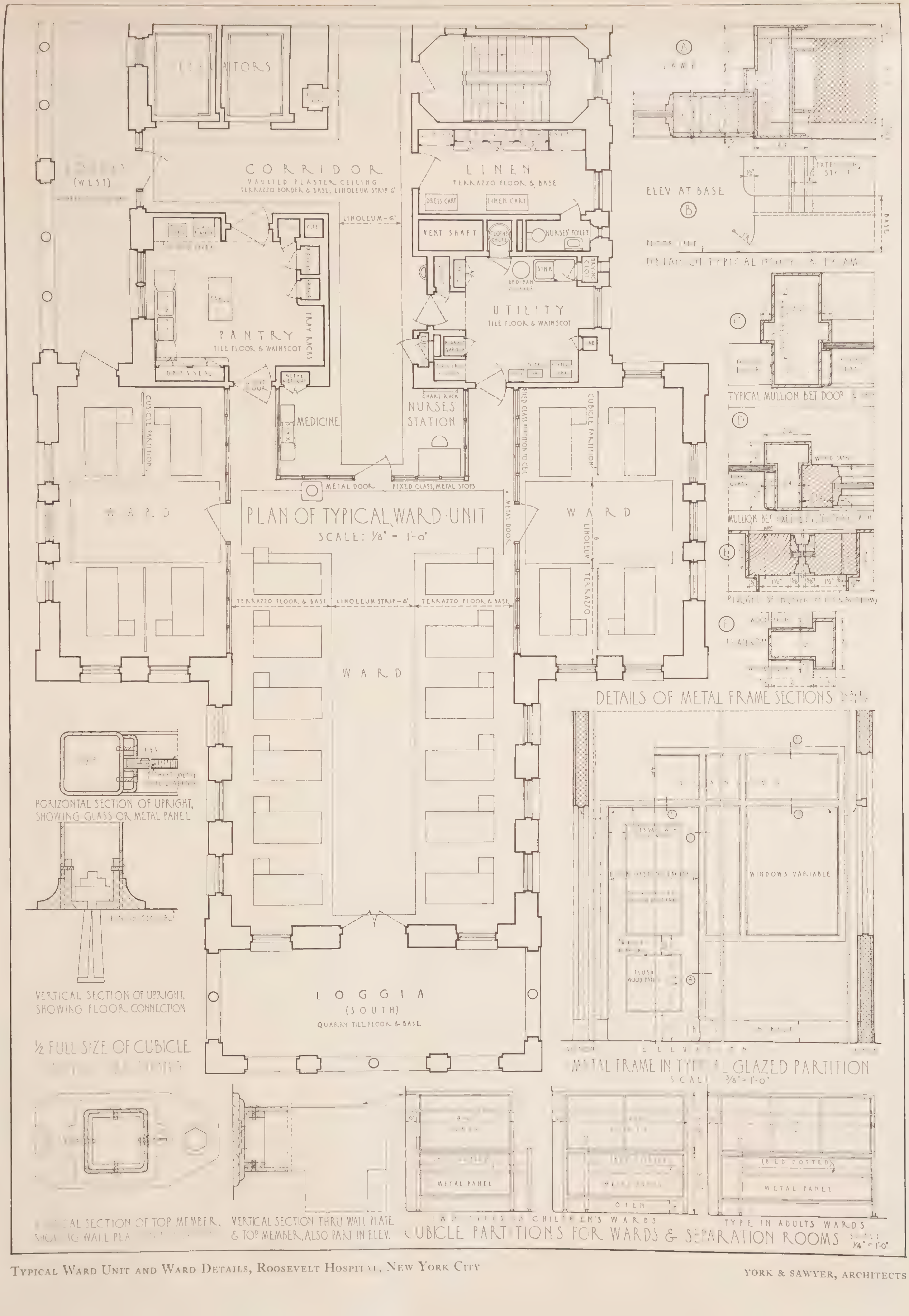
Refronted house of limestone in Burford, Oxfordshire. Circa 1765

Eggington Manor, Bedfordshire. Circa 1720



House in Towchester, Northamptonshire. Circa 1720





Typical Ward Unit and Ward Details, Roosevelt Hospital, New York City

York & Sawyer, Architects

NOTES

Typical Ward Unit and Ward Details, Roosevelt Hospital, New York City

YORK & SAWYER, ARCHITECTS

General Scheme:

The architects were requested to select the hospital ward which, of all the many excellent solutions they have built, was in their estimation the most adaptable to general problems and the one most satisfactory to patient and hospital staff. The Roosevelt ward here shown was selected because of a number of advantages, a few of the salient points being: station for nurse and medicine equally available for all three subdivisions of ward, yet it is enclosed by glass partition so that nurses may enjoy semiprivacy; the unit provides all the necessary supplementary rooms which any ward would need and are arranged in the minimum space with the most convenient sequence; open-air loggias are provided close at hand so that patients can easily be wheeled out; exposure is south, east, and west for the ward so as to catch the sun all day.

Floors and Bases:

In wards, corridors, and linen room, of terrazzo with linoleum strip in centre; in pantry and utility rooms, of tile, with tile wainscot.

Doors:

All flush, with either wood or glass panels; ⅜″ flush inlay strip where panels are of wood; top rail and side stiles vary with door sizes; middle rail always 7½″; bottom rail always 11″; 3′ 5″ from floor to bottom of upper panel (see drawing).

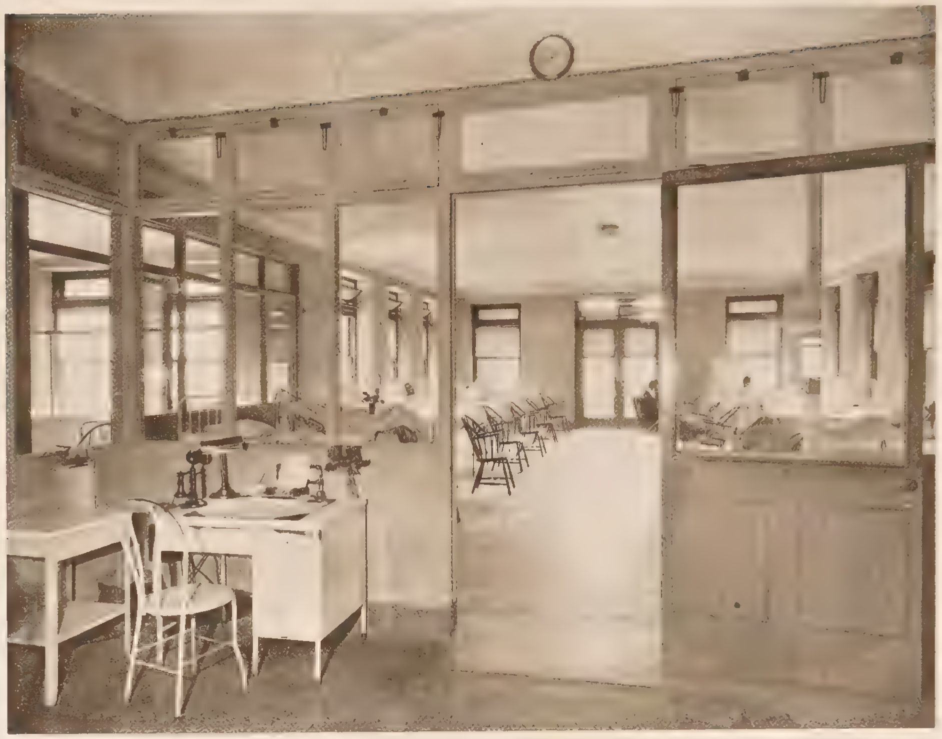
Cabinets and Small Closets:

Recessed in walls wherever possible, as well as blanket-warmers, etc.

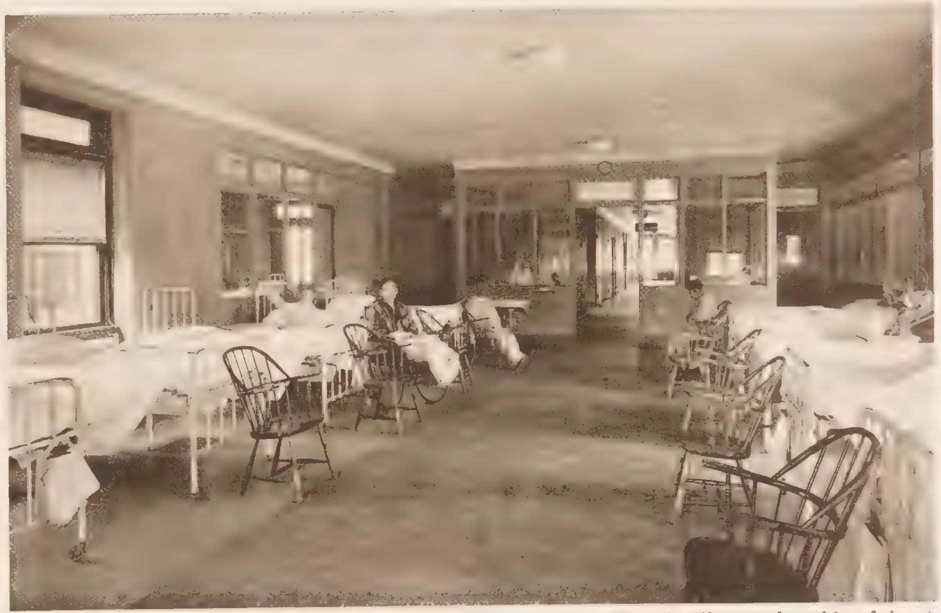
Utility Room:

Special refrigerator provided for all serums, medicines, etc., independent and isolated from one for foods in kitchen, to eliminate all possibility of food contagion. Type of bed-hopper used is free-standing in floor, but since hospital has been built, other types are made which are simpler in operation and are built into furred space of wall; bed-pans are placed in hopper and are automatically emptied and sterilized by steam.

Although hospital information is highly technical and usually closely guarded by many firms doing hospital work, York & Sawyer have freely consented to its publication here, and have on several previous occasions given Roosevelt Hospital ward data to architects requesting it. The ward illustrated has had much favorable comment, both in this country and abroad.



Looking into ward from nurses' station



Ward, with nurses' station beyond (See details on other side of sheet)

Roosevelt Hospital, New York City. York & Sawyer, Architects

Frank Goodwillie, A. I. A., of Goodwillie & Moran, New York, whose practice is principally schools and public buildings

A. Frank Wickes, A. I. A., St. Louis, Mo. Advisory architect, United Christian Missionary Society (of Disciples of Christ)

William Adams Delano, F. A. I. A., Delano & Aldrich, New York. Member U. S. Board of Architectural Consultants

H. M. King, A. I. A., Louisville, Ky. Architect-Secretary, Board of Church Extension, M. E. Church South

Wesley Sherwood Bessell, A. I. A., New York City, has designed many residences and educational buildings

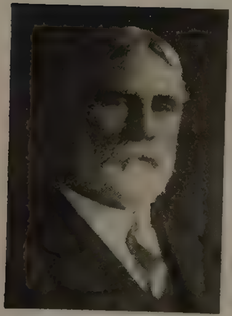
Philip M. Jullien, A. I. A., Washington, D. C. Architect of the Congressional Country Club, near Washington, D. C.

Henry C. Pelton, New York

Frank M. Machan, New York

Henry C. Pelton, Architects
Associated with Allen & Collens on the Park Avenue Baptist Church and Dr. Fosdick's new Riverside church

Edmund Beaman Gilchrist, A. I. A. Does principally residences of modern French type. Designed a group at Mariemont Village



Prescott O. Clarke, F. A. I. A. Clarke & Howe, Providence, R. I. A firm of long-standing reputation in design of ecclesiastical and educational buildings

You know these men by reputation — do you know them by sight?

Arthur Brown, Jr., A. I. A. Bakewell & Brown, San Francisco. Member U. S. Board Architectural Consultants. Awarded a distinguished honor certificate for the Temple Emanu-El.

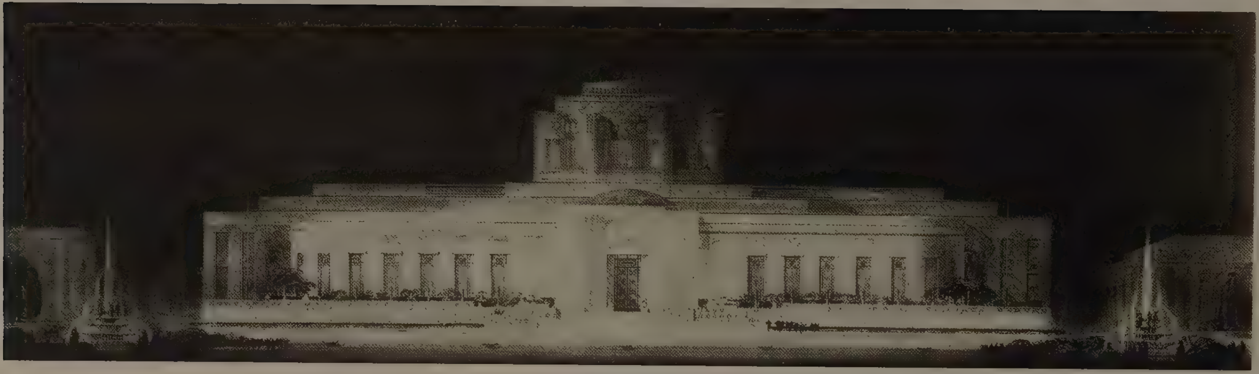
John Hoche, Chicago. Engaged in the general practice of a large city office

Milton B. Medary, President A. I. A., of Zantzinger, Borie & Medary, Philadelphia. Member of U. S. Board Architectural Consultants

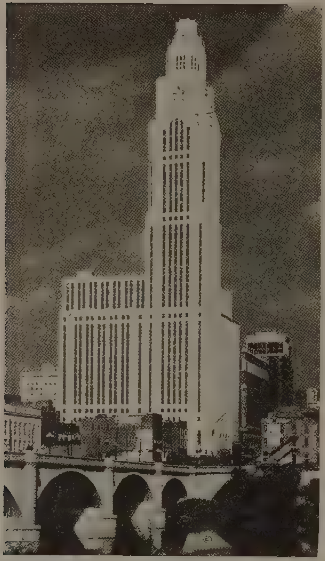
Ernest D. Ivey, A. I. A., of Ivey & Crook, Atlanta, Ga. Residences and public buildings

Louis A. Simon, A. I. A. Chief of Drafting Division, Office of the Supervising Architect, Treasury Department, Washington, D. C.

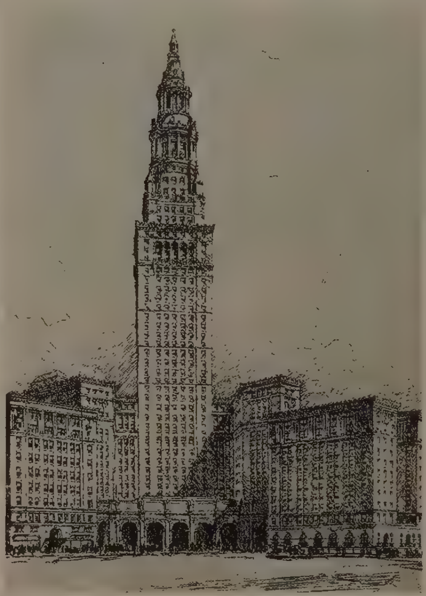
Louis Ayres, F. A. I. A., of York & Sawyer, New York. Member U. S. Board Architectural Consultants

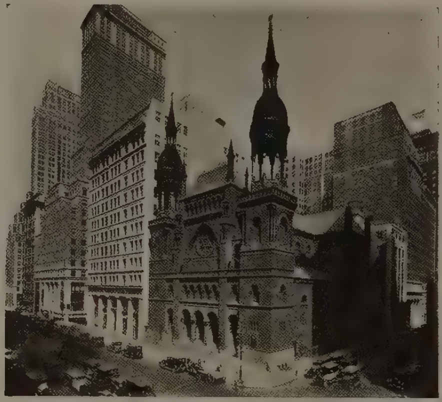


The winning design in the 20th competition for the Paris prize, Society of Beaux Arts Architects —"A National Broadcasting Station." Winner, Donald S. Nelson, of Chicago and New York



The American Insurance Union Citadel, Columbus, Ohio. C. Howard Crane, Architect

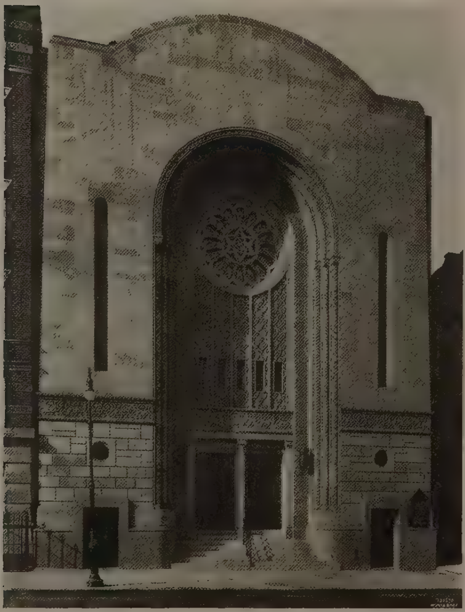


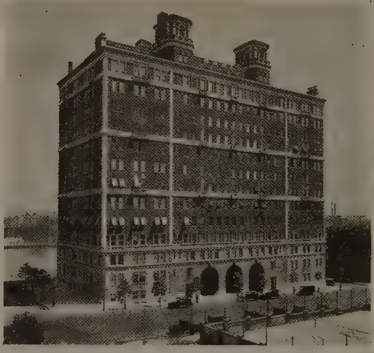


Another well-known landmark of 5th Ave., New York, Temple Emanu-El, has just been torn down

The new Union Terminal for Cleveland. Graham, Anderson, Probst & White, Archts.

Architectural News

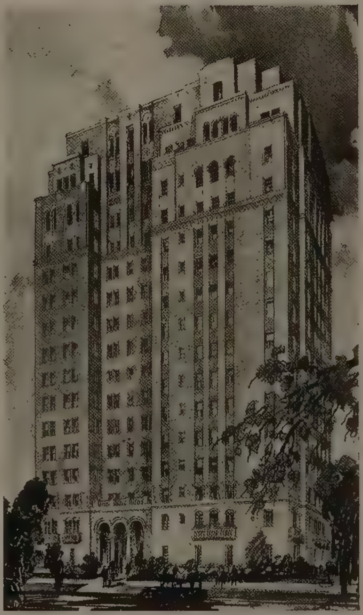


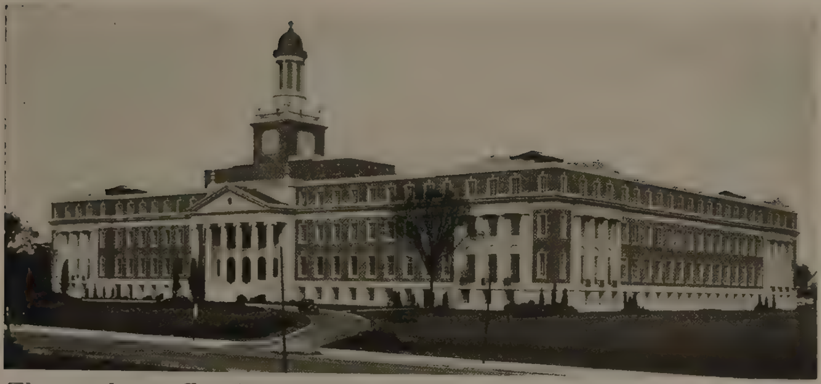


One Sutton Place, New York, a feature in the city's belated utilization of its waterfront. Cross & Cross, Architects

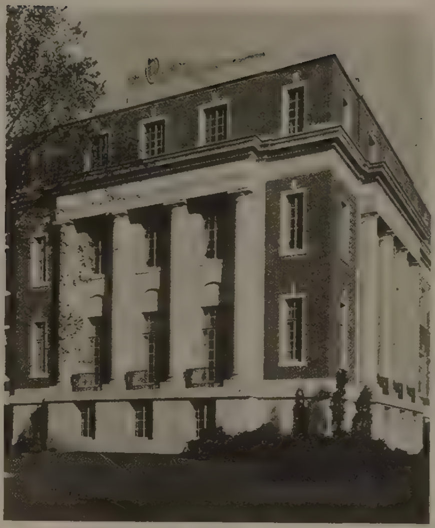
The new synagogue for the Congregation Ohab Zedek on West 95th Street, New York. Charles B. Meyers, Architect

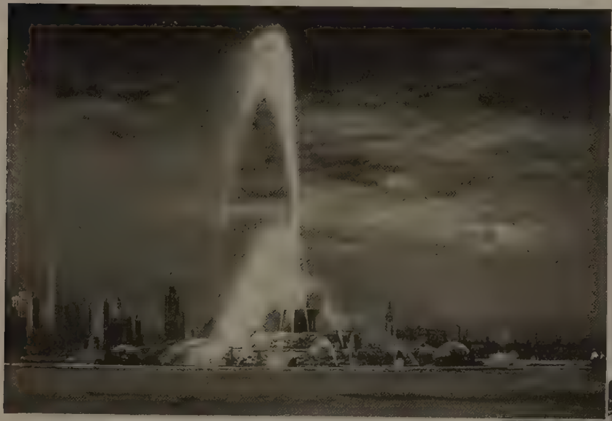
A new co-operative apartment-house to be built in Chicago. E. F. Quinn and R. T. Christiansen, Architects





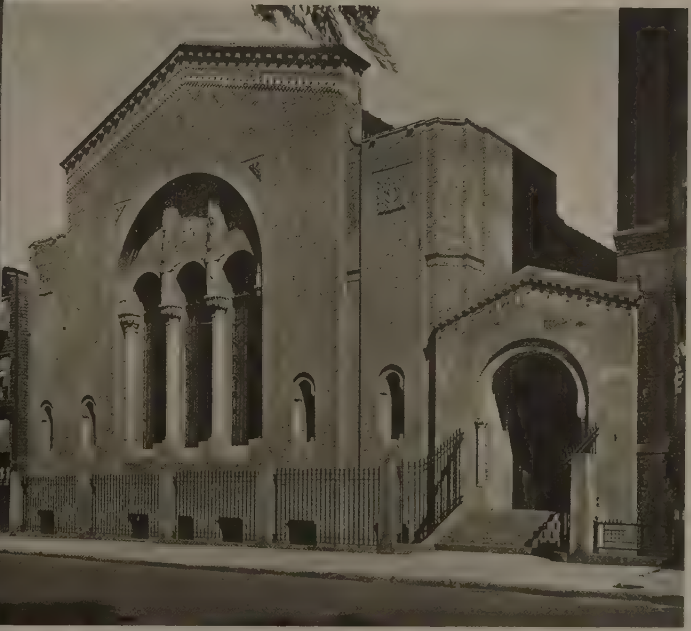
The new home office of the Massachusetts Mutual Life Insurance Company, at Springfield, Mass., occupies a twenty-acre tract. A detail of a corner bay is shown at the right. Kirkham & Parlett, of Springfield, were the architects



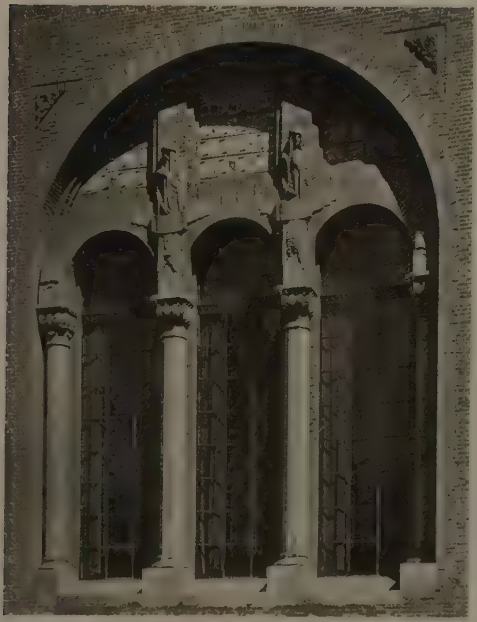


One of Chicago's newest lake-front features is the Clarence Buckingham Memorial Fountain. Bennett, Parsons & Frost, Architects

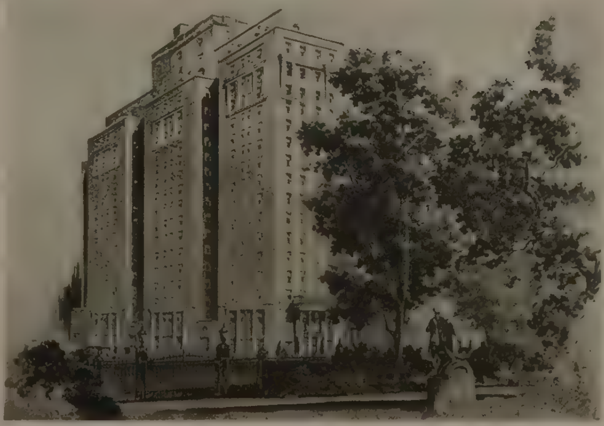
in Photographs



John Mead Howells, Architect, has just completed this new theatre auditorium, restaurant, and faculty dining-room for Pratt Institute, Brooklyn. A detail is shown below at the left.



Gramercy Park, New York, is fast being walled in by high buildings. This new hotel for women has just been finished. Murgatroyd & Ogden, Architects



EDITORIAL COMMENT

> *"I very much fear that, unless some solution is found, London traffic will be practically at a standstill in ten years."*
>
> Lord Lee of Fareham,
> Chairman of the Royal Commission of London Bridges.

⁂

THE BUILDING OF NEW YORK

At fairly regular intervals some one rises to remark that New York is overbuilt. He will perhaps cite statistics to prove his contention that there are more apartments or more offices than there are people to lease them. Usually he will start with the war period and its curtailment of all building and then proceed to show that the supply of housing and business property has since then been overtaking the demand until it has now exceeded it.

To save a lot of time and discussion, let us agree to everything he says. Let us, for the sake of argument—or, rather, for the sake of avoiding it—accept his contention that to-day, at six o'clock p. m., New York is overbuilt. What of it? To-morrow morning, at six o'clock, New York will be needing more buildings. Thus has it always been; thus, probably, will it always be. For New York does not stand still. The great centre of American business life is growing at a rate that has gotten out of control; New York itself cannot stop its own momentum. Sooner or later nearly every large business in the United States requires an office in New York City. Sooner or later every American citizen wants to visit it. It is the great point of arrival and departure for those who come to the United States and those who go out into the world at large. But that is not all. New York is never satisfied with itself—it requires better hotels, better office buildings, better homes, better stores. Its new buildings are scarcely occupied before they are torn down to make way for better ones. The great steel frames of its structures will never disintegrate from rust—they are scrapped before rust can start. And all this is not a result of New York's own effort or even volition. It is beyond the power of men to accelerate or slow down. It moves on like a tidal wave, like the march of the seasons, like the revolution of the globe.

New York overbuilt? To-day, perhaps; to-morrow morning, most assuredly not!

⁂

THE SAFETY OF ST. PAUL'S, LONDON

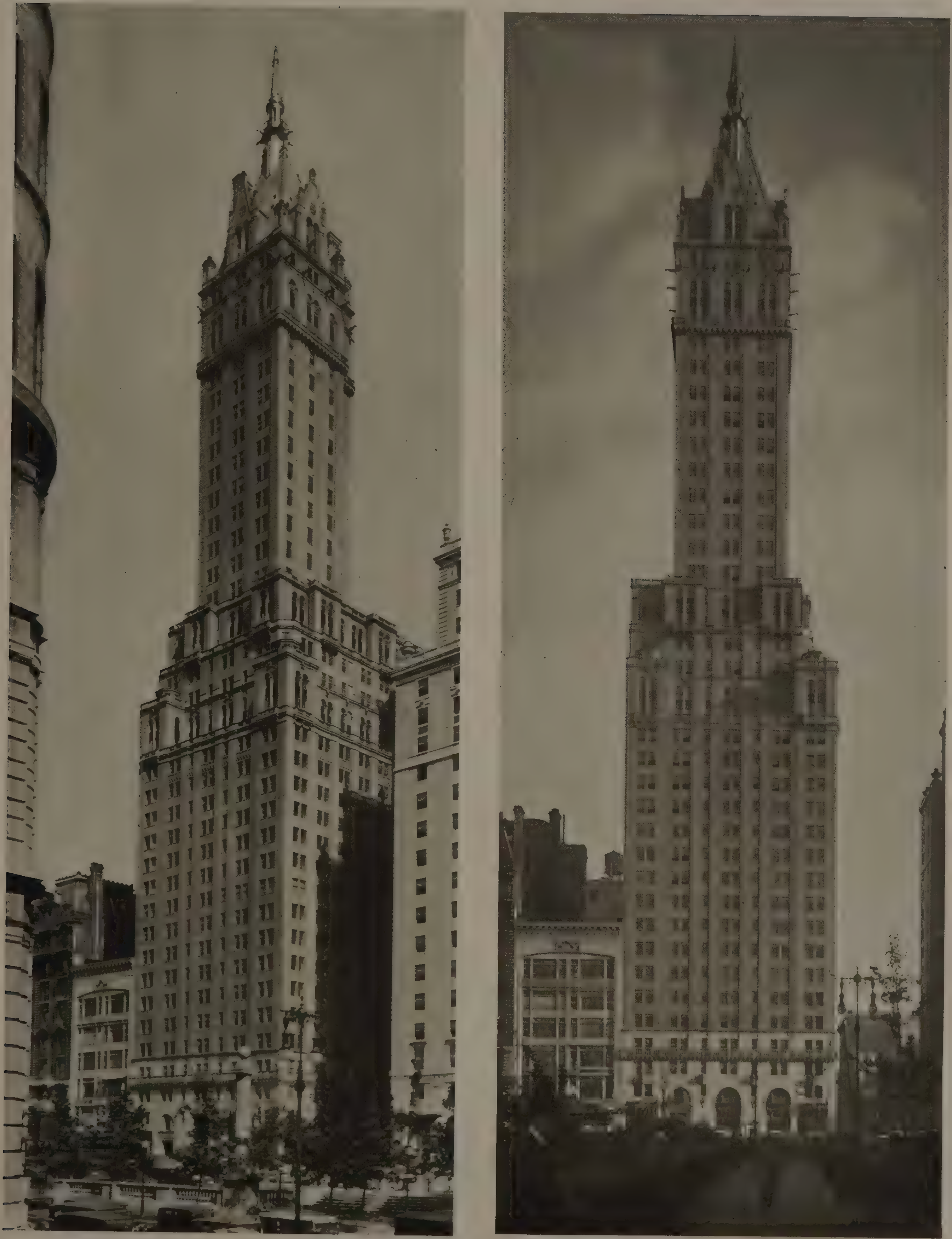
There has recently been published a tiny volume by S. A. Alexander, Canon and Treasurer of St. Paul's, in which is told the interesting story of how Wren's great dome was threatened and how that threat was nullified. It was in 1911, in connection with a proposal to put an underground tramway tube near the east end of the Cathedral, that it became evident that the great dome was none too secure. The foundations of the main crossing piers extend only four and a half feet below the crypt floor. Not far below their footings lies a bed of sand and gravel—a perfectly sound foundation so long as it is laterally confined. Modern sewers and tubes and deeply set foundations near by, however, are encroachments fraught with real danger. The increasing vibration of modern hard pavements and heavy trucking is a factor that Wren could not have foreseen. Even as things were, the structure settled somewhat unevenly as it was built. Justification courses were introduced to bring back to a true horizontal the walls that were tilting slightly to the southwest. Wren was building on soil that had been in compression under Old St. Paul's, as well as on soil that had not been so loaded. Moreover, he was forced to use an uncoursed rubble in his piers that was of many kinds of stone—laid up in lime mortar that, shut off from the air by the outer skin of Portland stone ashlar, never properly consolidated to the core. The close jointing of the facing-stone resulted in spalling where pressure happened to concentrate. Moreover, the iron which was freely used in the construction, for dowelling, cramping bars, and similar uses, has seriously disintegrated.

Starting before the World War, the great task of strengthening St. Paul's has moved slowly but steadily onward. In a comparatively few years a total of nearly £400,000 has been subscribed by rich and poor, by Londoners, and even by children out in the far corners of the Empire. The piers have been bored horizontally, reinforced with gun-metal rods, and grouted with cement under pressure. The iron throughout is being replaced by gun-metal. The piers having been made secure, the facing stones are easily reset or replaced. A stupendous task has been carried out in the slow, sure, thorough manner that characterizes the Englishman in all that he does. We in America rejoice with all London that St. Paul's is once more safe, and that those that come after us may continue to read in a quiet corner of the crypt the epitaph over Sir Christopher Wren's modest grave:

"Si monumentum requiris, circumspice."

⁂

> *"High buildings are not to be condemned because of height in itself, but because of lack of proper relation and scale between height and open areas surrounding all buildings for the purpose of providing adequate room for traffic and transit, and other necessities of transportation, as well as for light and air."*
>
> Thomas Adams,
> Director, Committee on Regional Plan of New York and Its Environs.



Photograph by Howard Cox

THE SHERRY-NETHERLAND, NEW YORK CITY

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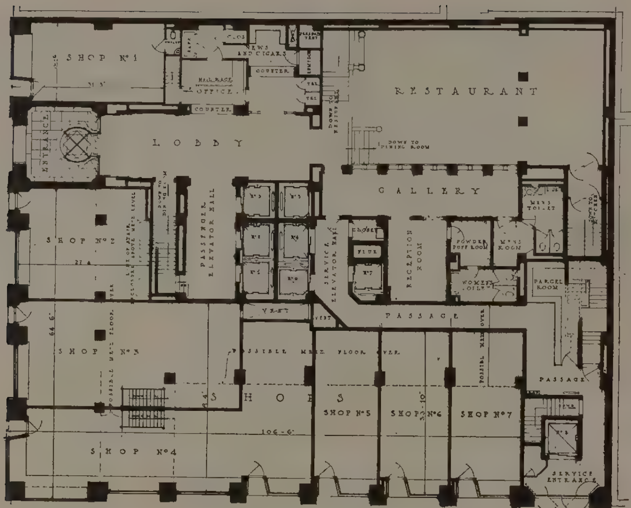
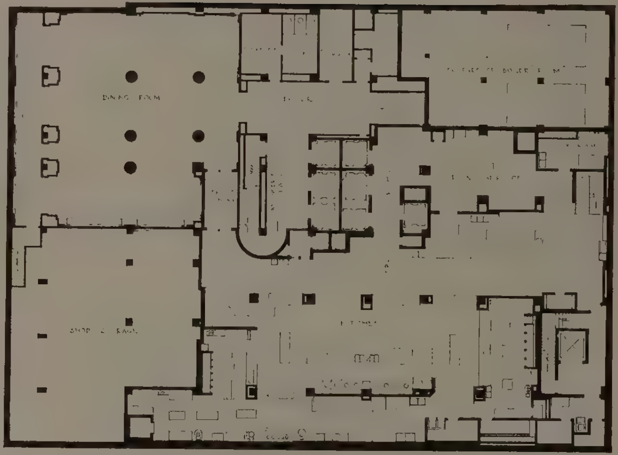
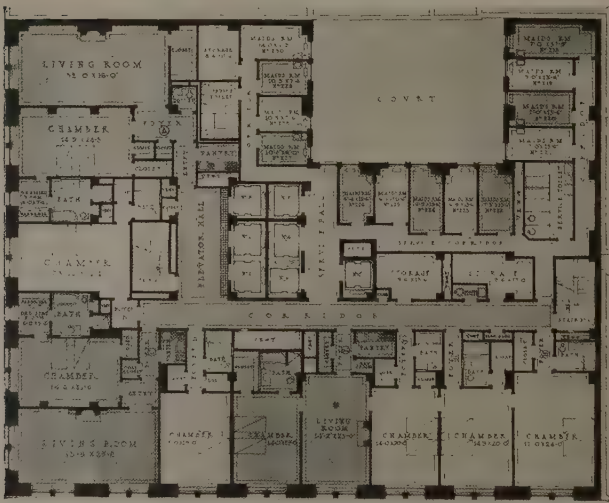
SCHULTZE & WEAVER, ARCHITECTS BUCHMAN & KAHN, ASSOCIATE ARCHITECTS



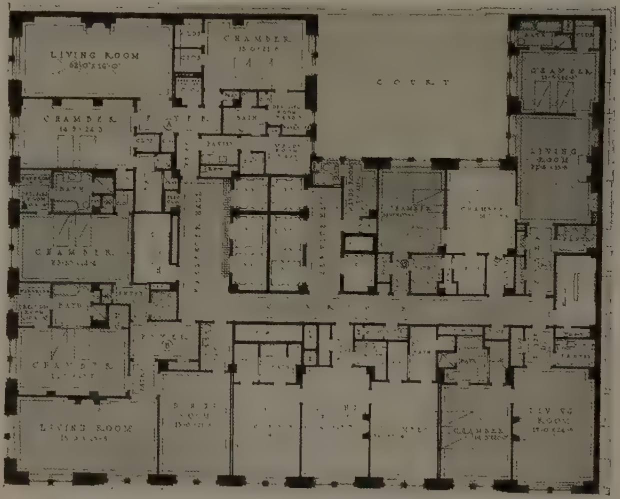
Ground-floor plan. The space marked "Restaurant" is now called "The Dining-room"



Basement-floor plan. The "Dining-room" has become "The Grill." The relationship of kitchen and serving space to grill, to dining-room, and to room-service elevators is particularly ingenious



Plan of the second floor.



A typical floor plan, showing the division into apartments

THE
SHERRY-NETHERLAND
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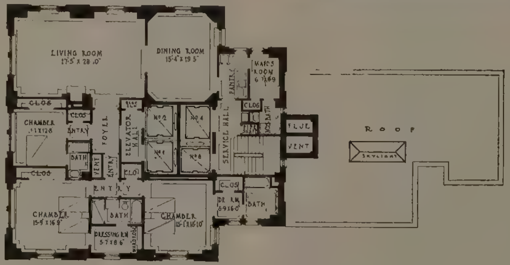
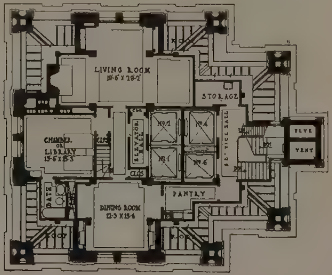
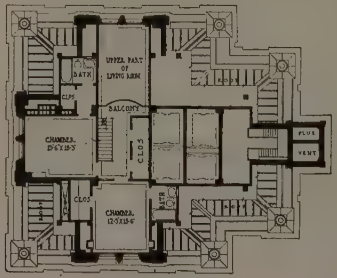


Plan of 24th floor

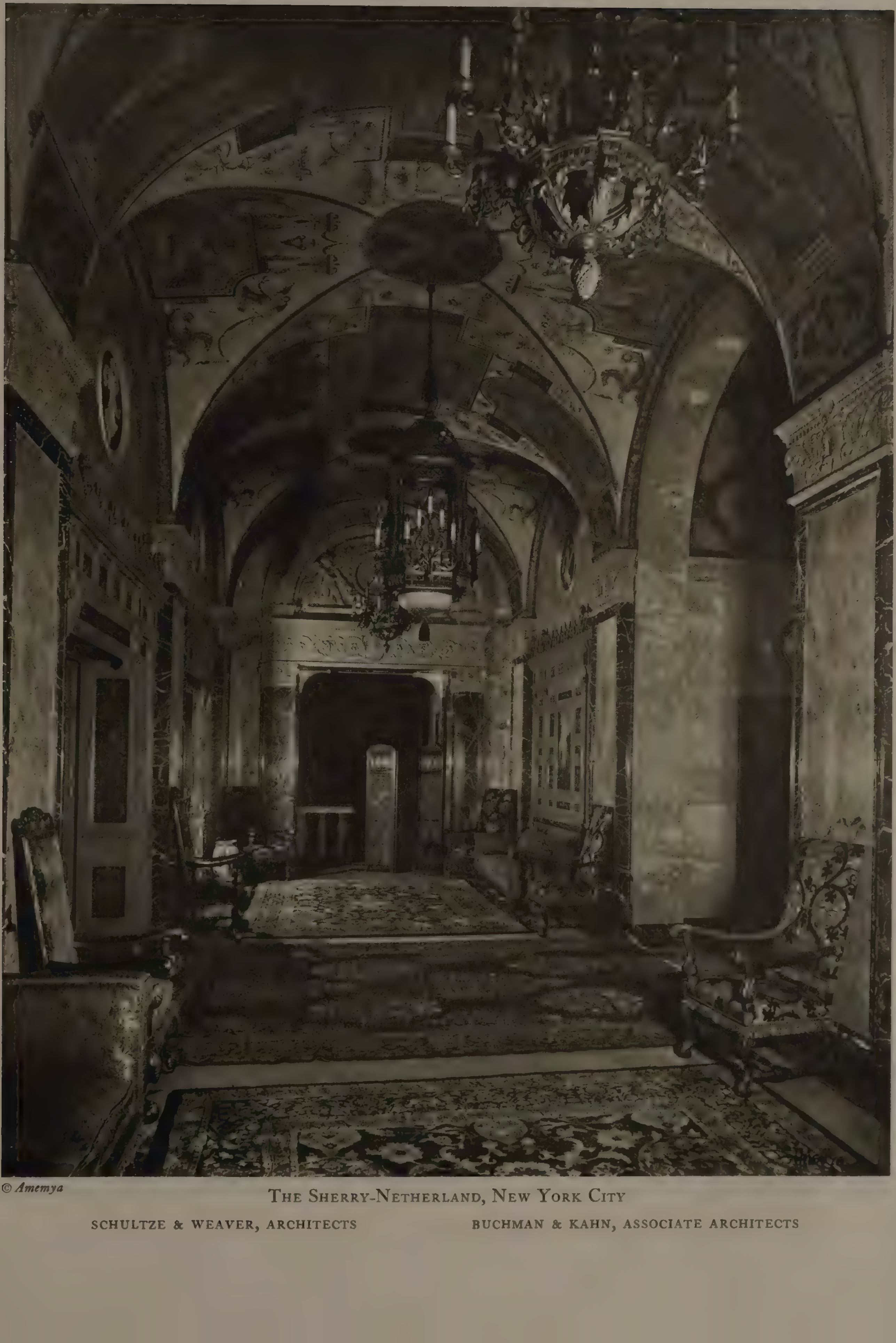
SCHULTZE & WEAVER,
ARCHITECTS
BUCHMAN & KAHN, ASSOCIATE
ARCHITECTS



Plan of 36th floor, a duplex with 37th



Plan of 37th floor, upper part of duplex



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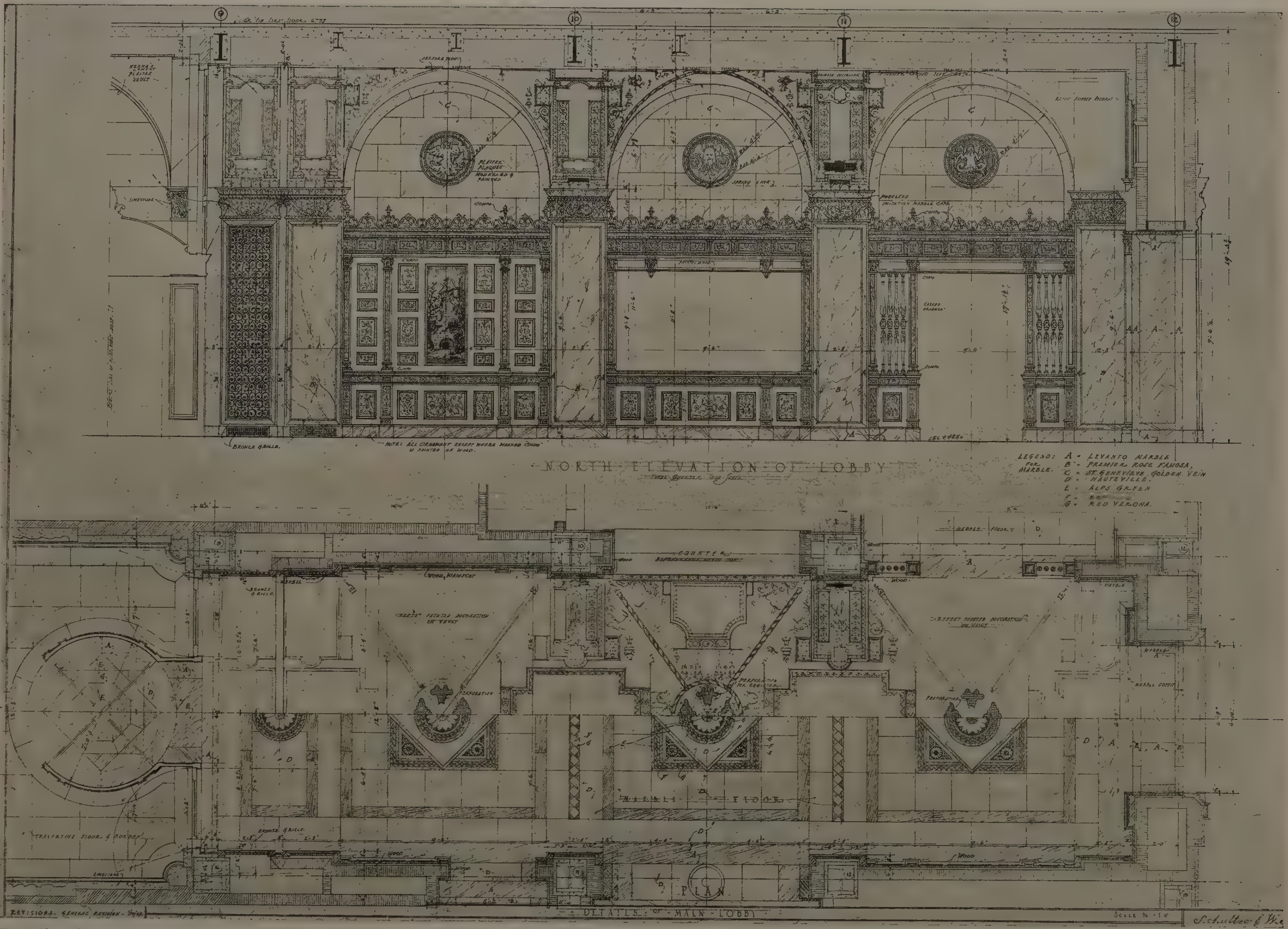
THE SHERRY-NETHERLAND, NEW YORK CITY

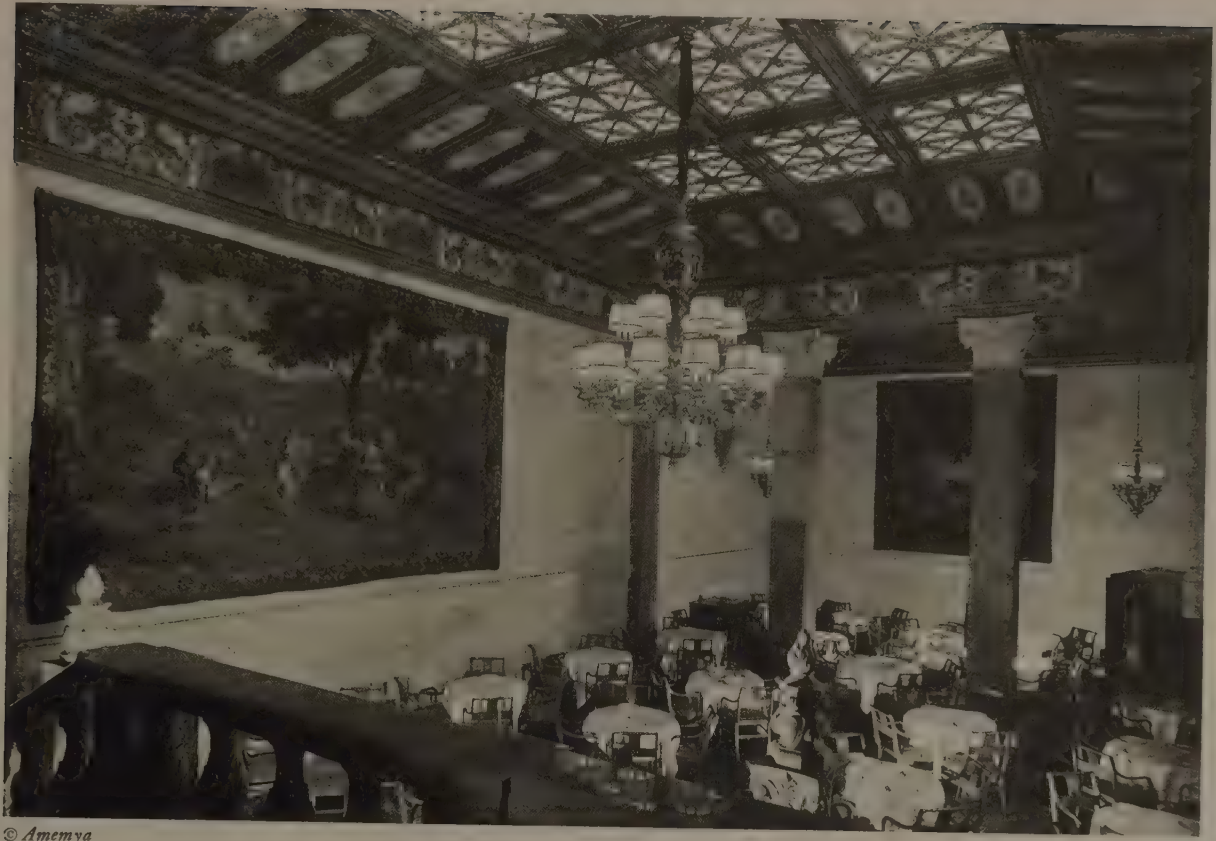
SCHULTZE & WEAVER, ARCHITECTS BUCHMAN & KAHN, ASSOCIATE ARCHITECTS



Details of main lobby

The Sherry-Netherland, New York City

SCHULTZE & WEAVER, ARCHITECTS
BUCHMAN & KAHN, ASSOCIATE ARCHITECTS



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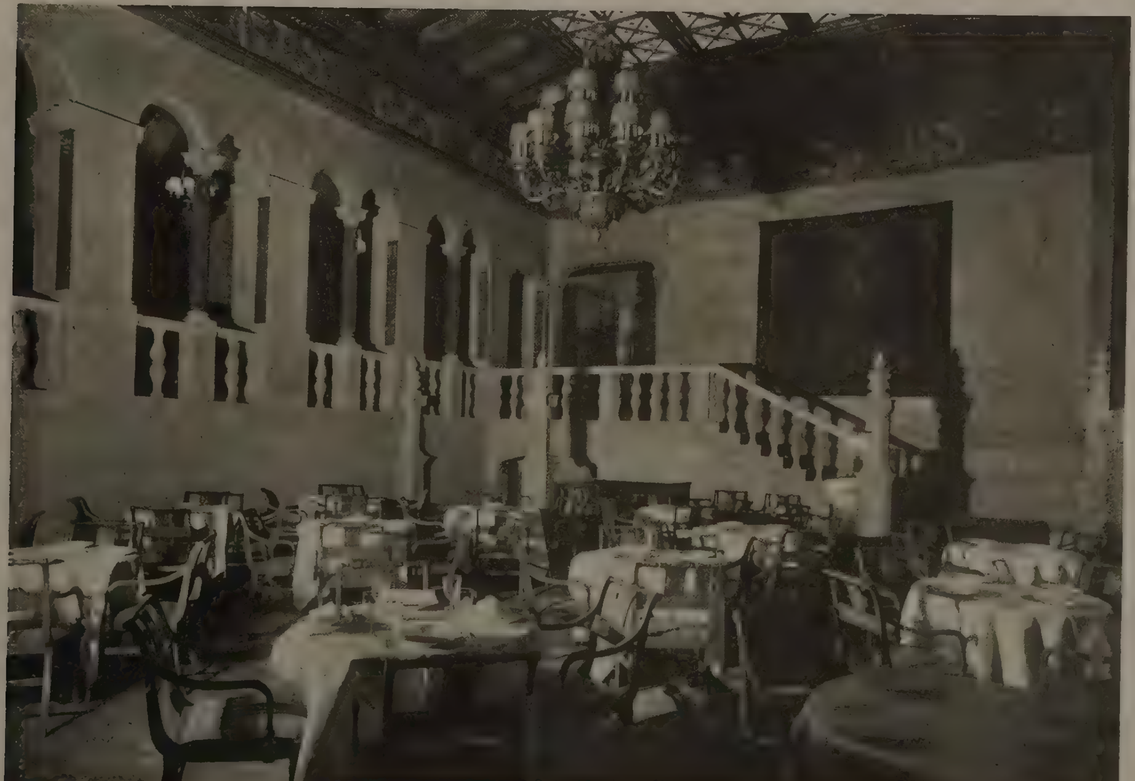

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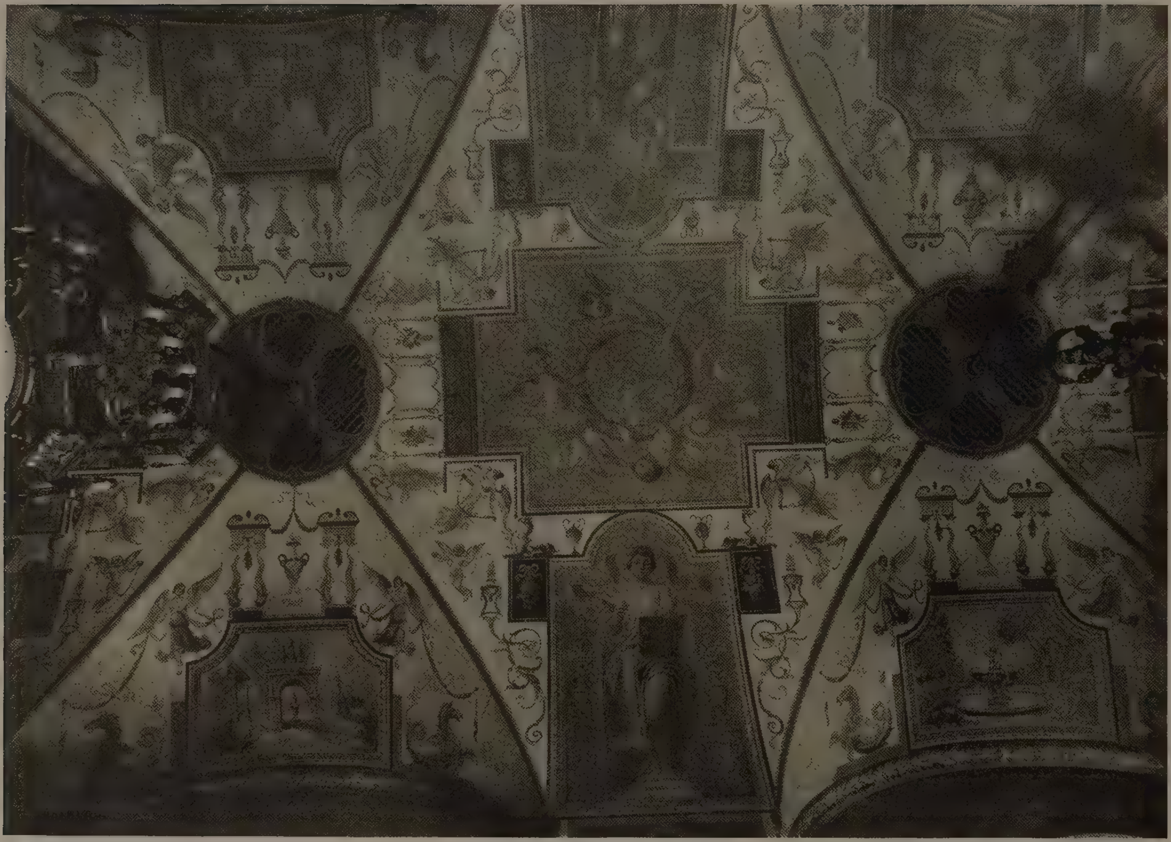
The dining-room SCHULTZE & WEAVER, ARCHITECTS
BUCHMAN & KAHN, ASSOCIATE ARCHITECTS

THE SHERRY-NETHERLAND, NEW YORK CITY



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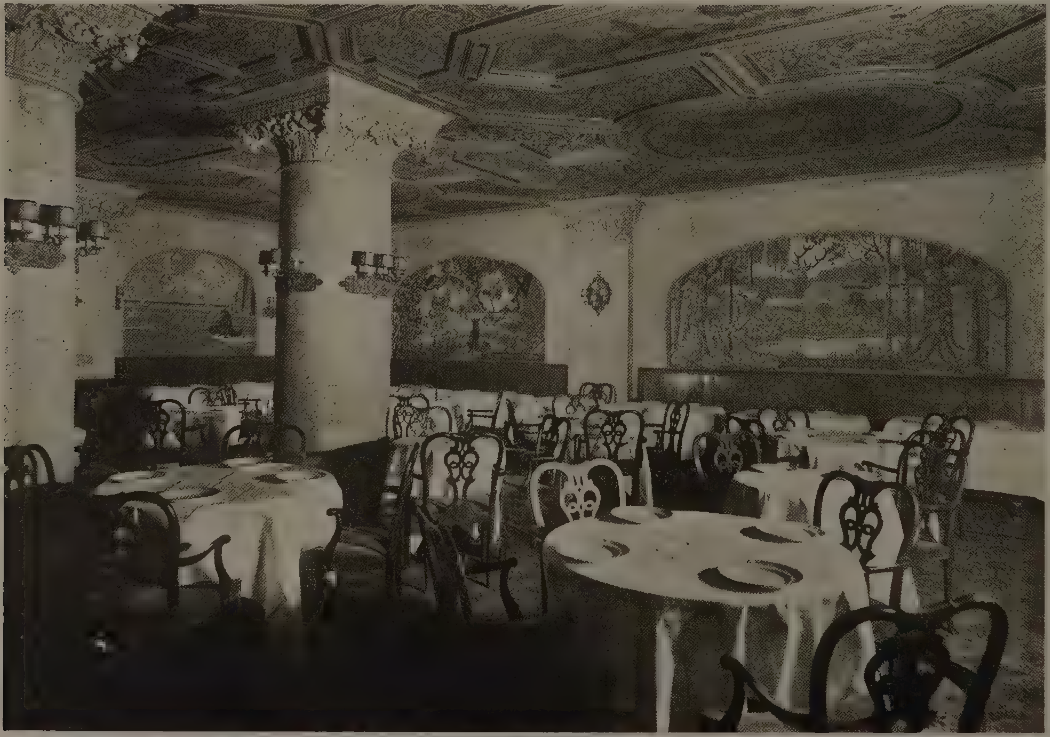
Ceiling in main lobby



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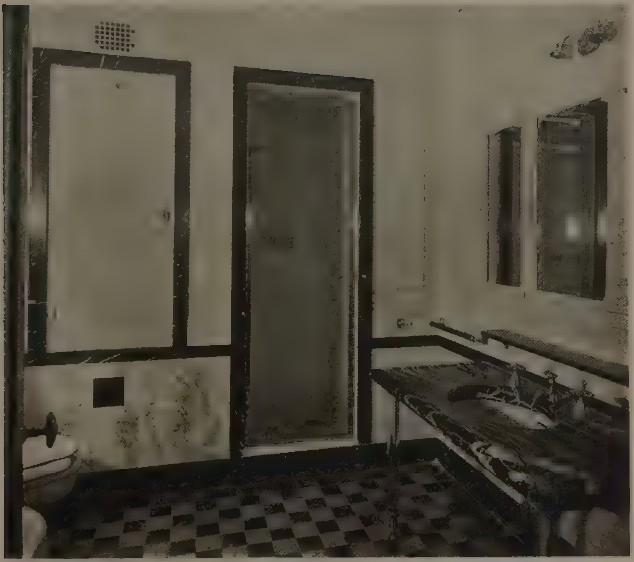
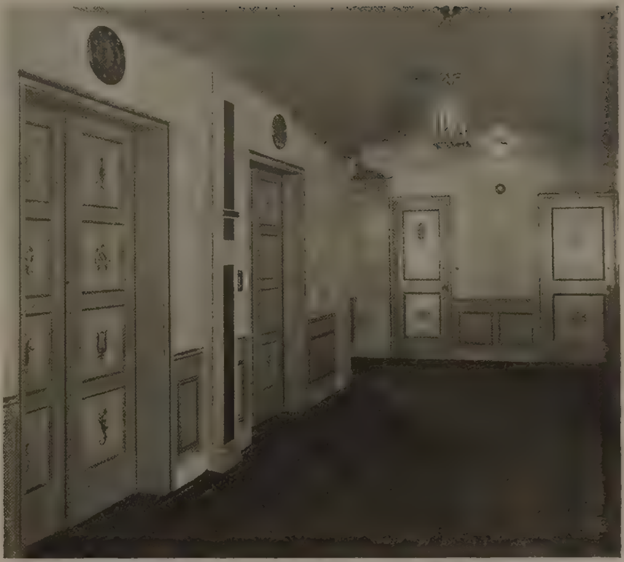
The Grill

SCHULTZE & WEAVER, ARCHITECTS
BUCHMAN & KAHN, ASSOCIATE ARCHITECTS

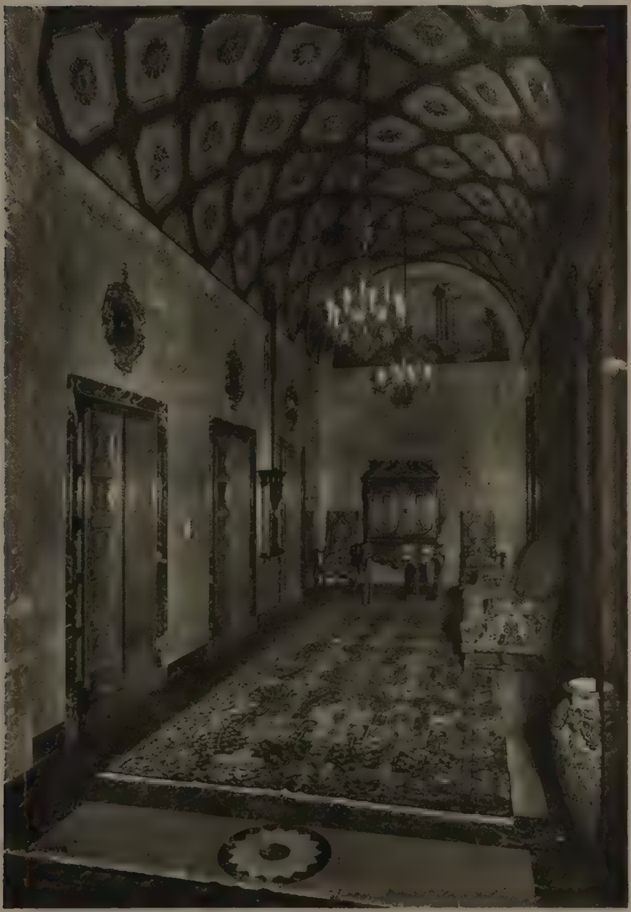
THE SHERRY-NETHERLAND, NEW YORK CITY



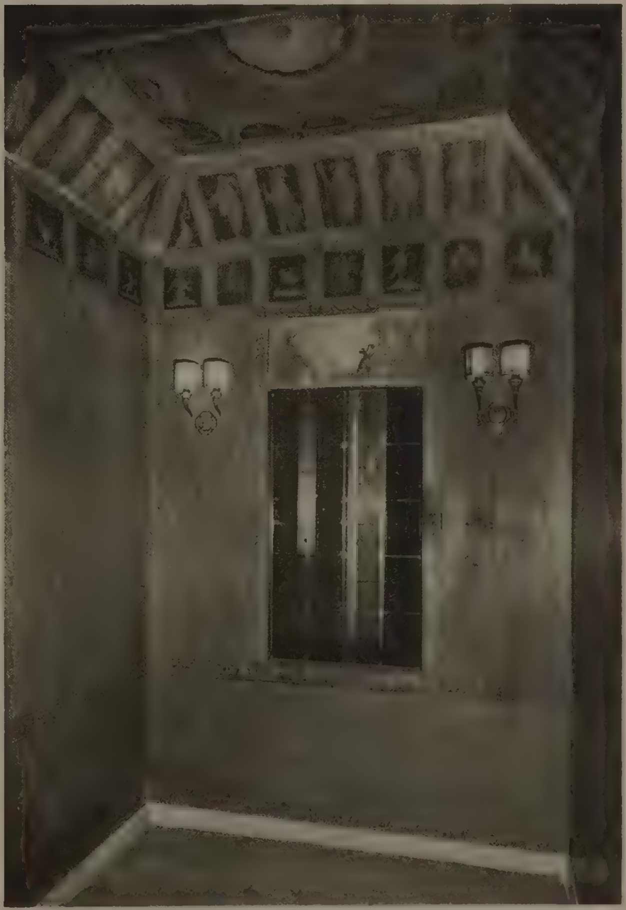
A typical bathroom in black-and-white marble



Elevator and apartment doors on a typical floor



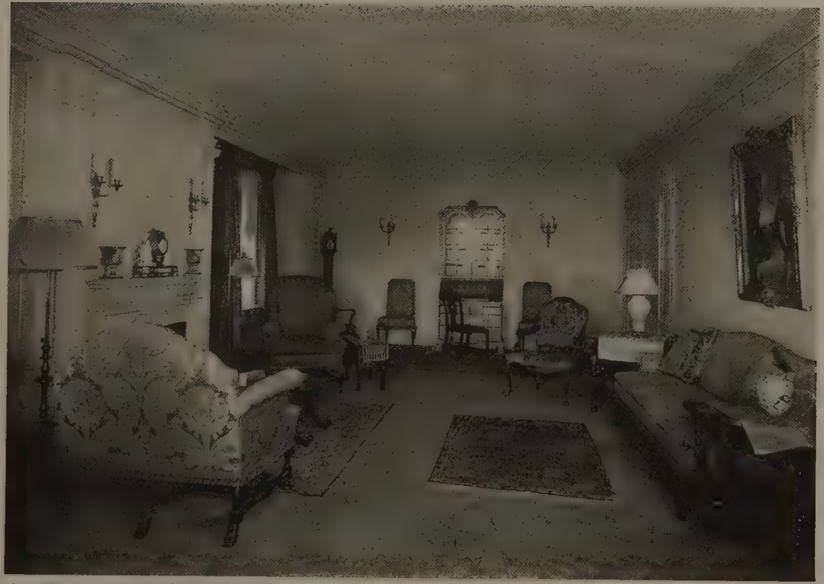
Elevator lobby on first floor



The interior treatment of an elevator

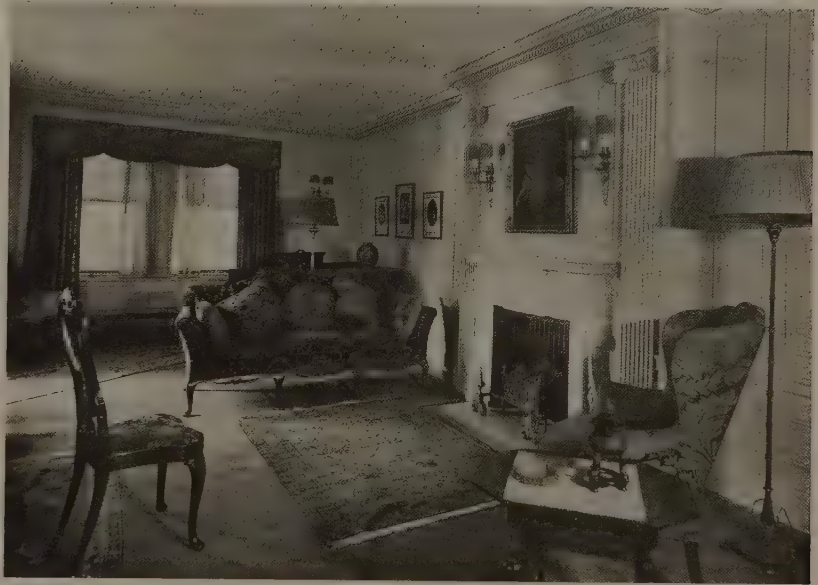
THE SHERRY-NETHERLAND, NEW YORK CITY

SCHULTZE & WEAVER, ARCHITECTS BUCHMAN & KAHN, ASSOCIATE ARCHITECTS

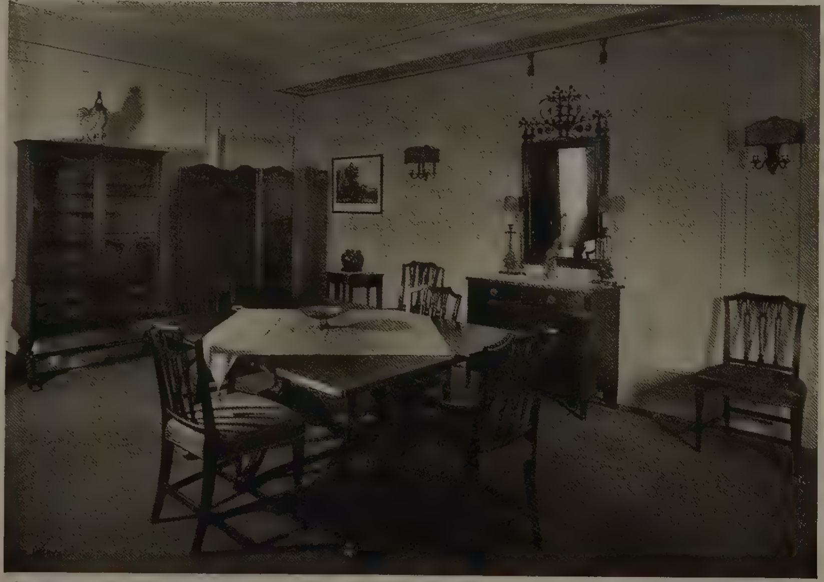


An apartment living-room

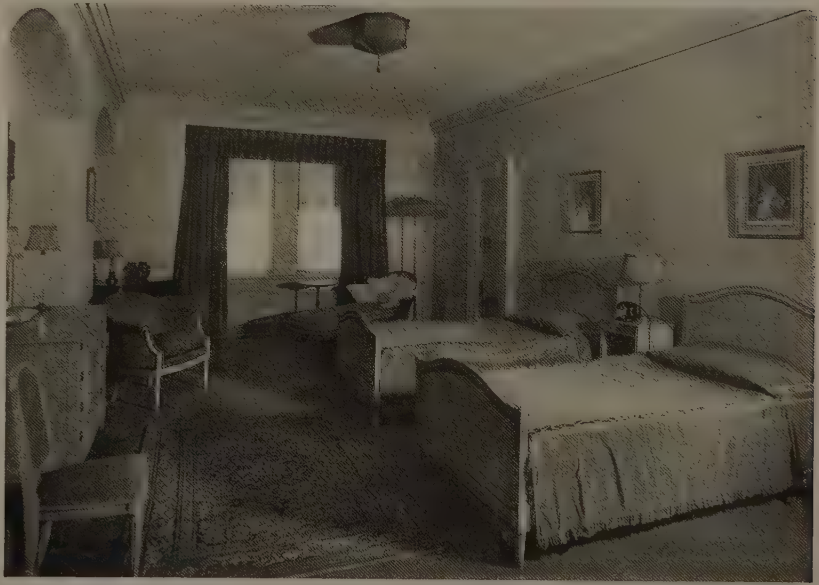
Photographs © Amemya



An apartment living-room



An apartment living-room



An apartment master's bedroom

The Sherry-Netherland, New York City

SCHULTZE & WEAVER, ARCHITECTS

BUCHMAN & KAHN, ASSOCIATE ARCHITECTS

The Architectural Clinic

ON BECOMING INTIMATE WITH ENTASIS

(See Diagram on Back of Sheet)

ONE of the best-known office short-cuts is to draw columns at some small scale and letter underneath the note that on the shop drawings the entasis of respective drums shall be worked to an accuracy of one-sixteenth of an inch. And an equally well-known shop short-cut is to guess at the entasis, draw it where the pencil skates, and scale off the results to thirty-seconds of an inch with an occasional sixty-fourth to make it look wise.

Mr. Egerton Swartwout, whose Montsec Memorial is shown on pages 301–304, has an entasis system whereby he ensnares dimensions which are as accurate as they are simple to determine. He says he is indebted to the scholarly findings of Mr. Gorham P. Stevens, director of the American Academy in Rome, in a treatise published about three years ago on classic columns and their habits. Shown on the following page is a diagrammatic elevation of the corner columns, Greek Doric, of the Montsec Memorial, shorn of its dimensions in millimetres, and made general by members of the alphabet.

The operations are really far more simple than the dotted lines would have the eye believe. In fact they are readily digestible even after luncheon. In the order of their appearance they are as follows:

(1) The column is drawn at whatever scale the designer is accustomed to working, with the amount of entasis scaled off in inches and the point on the column shaft marked at which this maximum occurs. In the diagram assume that the maximum entasis is to be at the dotted line about half way up the column, indicated by the small letter "k," and that the actual entasis is indicated in solid black between G' and H' on the column shaft.

(2) From the necking of the column a perpendicular line is dropped until it strikes the base, or if you prefer, lay off on the base of the column a distance equal to the radius at the necking as at the point Y'. Determine from the scale study the radius of the column at the base, and determine in inches the difference between the radius at the necking and at the base, as $Y'\,Z'$. This dimension in inches should then be laid off beginning from any perpendicular line, as XY, and extending in an easterly direction as YZ. It might be laid off at actual size, but for the sake of accuracy it might better be increased by any factor, let us say in this case, four times. To review: the actual difference between the radius at necking and base is calculated in inches, and then laid off on the line of the base so that YZ is four times the actual size of the radii difference. The triangle $X'\,Y'\,Z'$ on the scale drawing of the column is shown at an exaggerated horizontal scale by the triangle XYZ. On the diagram the full horizontal lines indicate the drums, and on each are marked (in the triangle XYZ) such notes as "$A \times 4$," meaning that the distance A' on the scale drawing is represented in the triangle XYZ by a line four times the actual length of A'.

(3) On the dotted line which passes through "k" (the point of maximum entasis), and beyond the point P, four times the actual entasis is laid off in inches, as shown by the note on the diagram, "4× actual maximum entasis," ending at a point we may call $\mathcal{Q}$.

(4) Through the point $\mathcal{Q}$ and parallel to XZ, a line is drawn, ab.

(5) The distances between a and $\mathcal{Q}$ and $\mathcal{Q}$ and b may be divided into any number of segments, let us say 4, as shown by the dotted divisions to the right of XZ. Similarly divide the distances Xa and Zb into the same number of segments, in this case 4 as we elected above.

(6) Connect point $\mathcal{Q}$ with the four divisions on Xa and Zb as shown by the radiating lines in the diagram, and mark with a dot or circle the intersections with the horizontals explained in Step 5, as points c, d, e, f, g, and h.

(7) Plot a curve through the points X, c, d, e, $\mathcal{Q}$, f, g, h, and Z. For the mathematically minded we have Mr. Swartwout's word for it that this curve is composed of two tangent parabolas passing through X, $\mathcal{Q}$, and Z.

(8) Everything is now over but the scaling. To determine the radius of the column at any point, as for example, on the lines representing the drums of the column, merely scale the length from the line XY to the plotted curve and divide this result by four. This result plus the radius at the necking is the column radius at that height. For example, the radius at B' can be determined by scaling from m to n, dividing the result by four, and adding this to the radius of the column neck. In the actual drawing this distance was 7 7/16″, although it might have been determined down to thirty-seconds or sixth-fourths with a magnifying-glass, but at any rate the distances are always great enough (by making the angle XZY more acute for a shorter column) so that accuracy down to a 1/16″ can be read with ease by even the office boy.

For the type of column whose entasis does not get under full sail until one-third up the shaft, the same principle applies: in the accompanying diagram consider the line of the column-base as being the point at which the entasis begins and follow the steps outlined above. For the inquisitive and doubting we suggest both Mr. Stevens's investigations and the jolly old text-book intricacies on conic sections; for the trusting, the formula as given.

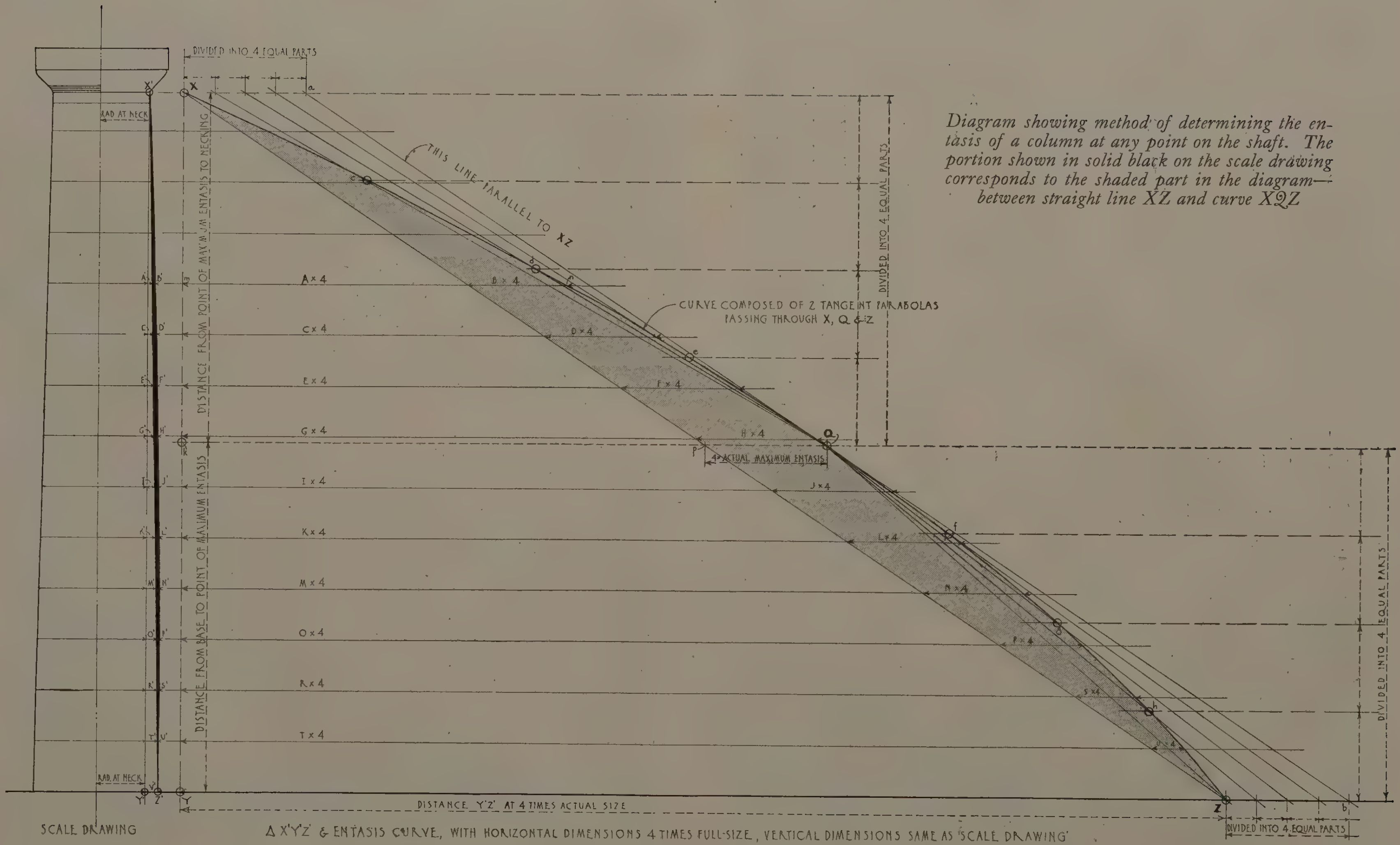
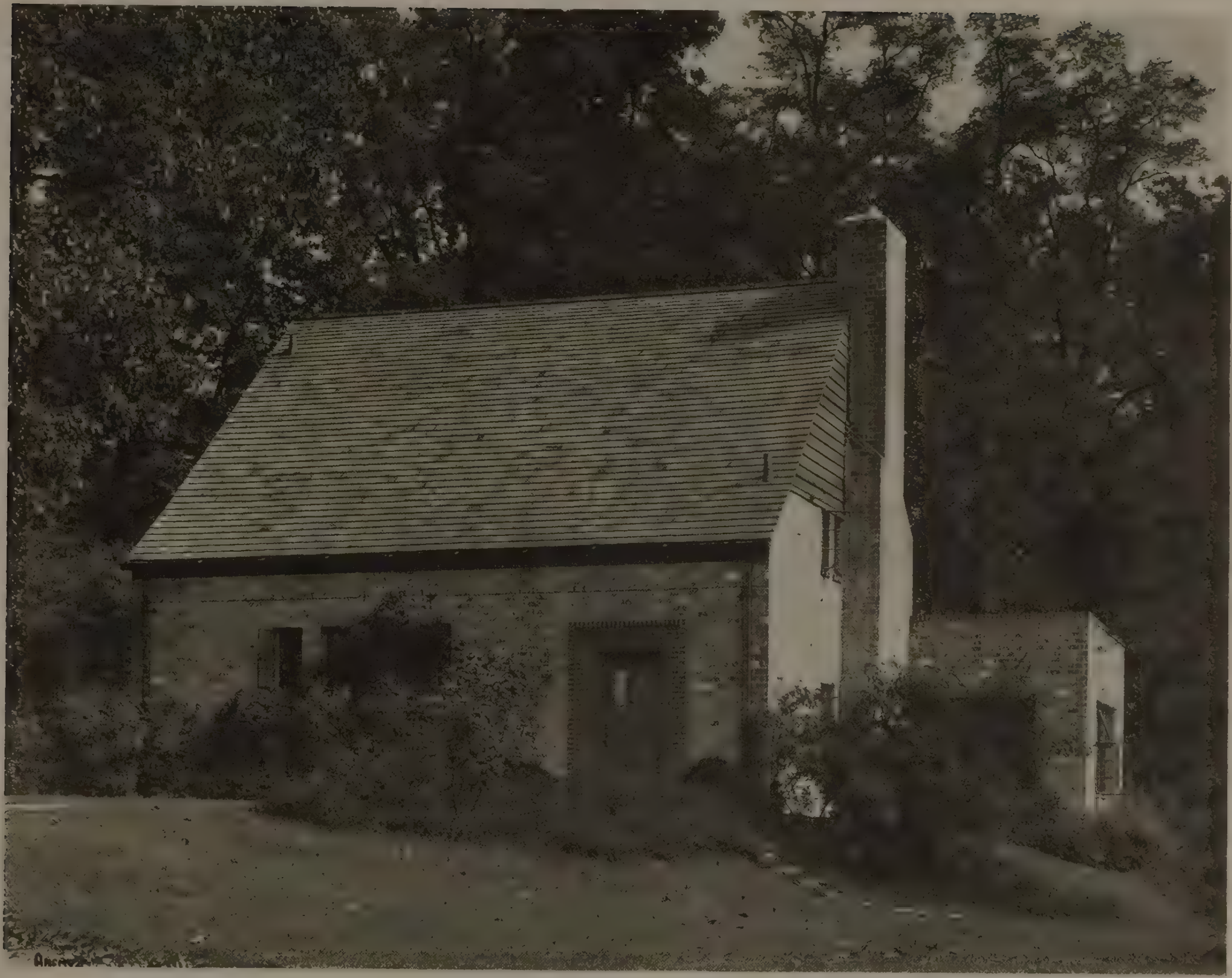
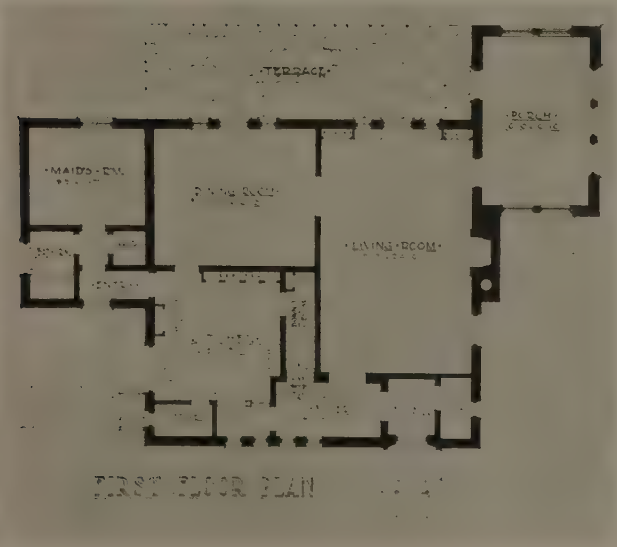

DIVIDED INTO 4 EQUAL PARTS
X
X'
a
b
c
d
e
f
g
h
Q
P
Z
Z'
Y
Y'
RAD. AT NECK
THIS LINE PARALLEL TO XZ
CURVE COMPOSED OF 2 TANGENT PARABOLAS PASSING THROUGH X, Q & Z
DISTANCE FROM POINT OF MAXIMUM ENTASIS TO NECKING
DISTANCE FROM BASE TO POINT OF MAXIMUM ENTASIS
4 × ACTUAL MAXIMUM ENTASIS
A × 4
B × 4
C × 4
D × 4
E × 4
F × 4
G × 4
H × 4
I × 4
J × 4
K × 4
L × 4
M × 4
N × 4
O × 4
P × 4
R × 4
S × 4
T × 4
U × 4
DISTANCE Y'Z' AT 4 TIMES ACTUAL SIZE
SCALE DRAWING
Δ X'Y'Z' & ENTASIS CURVE, WITH HORIZONTAL DIMENSIONS 4 TIMES FULL-SIZE, VERTICAL DIMENSIONS SAME AS 'SCALE DRAWING'

Diagram showing method of determining the entasis of a column at any point on the shaft. The portion shown in solid black on the scale drawing corresponds to the shaded part in the diagram—between straight line XZ and curve XQZ

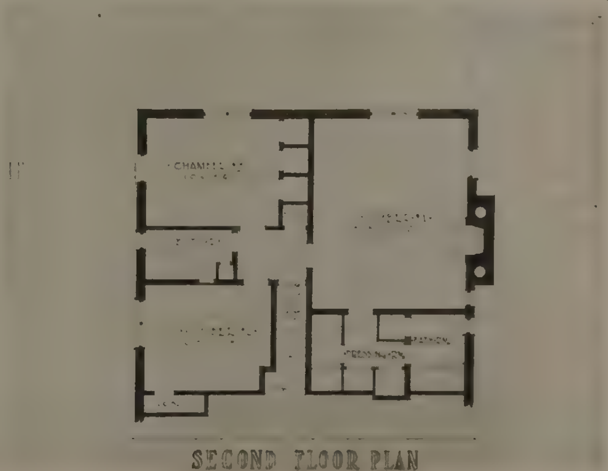


House of Paul Rie, Port Washington, Long Island
CLARENCE S. STEIN, ARCHITECT

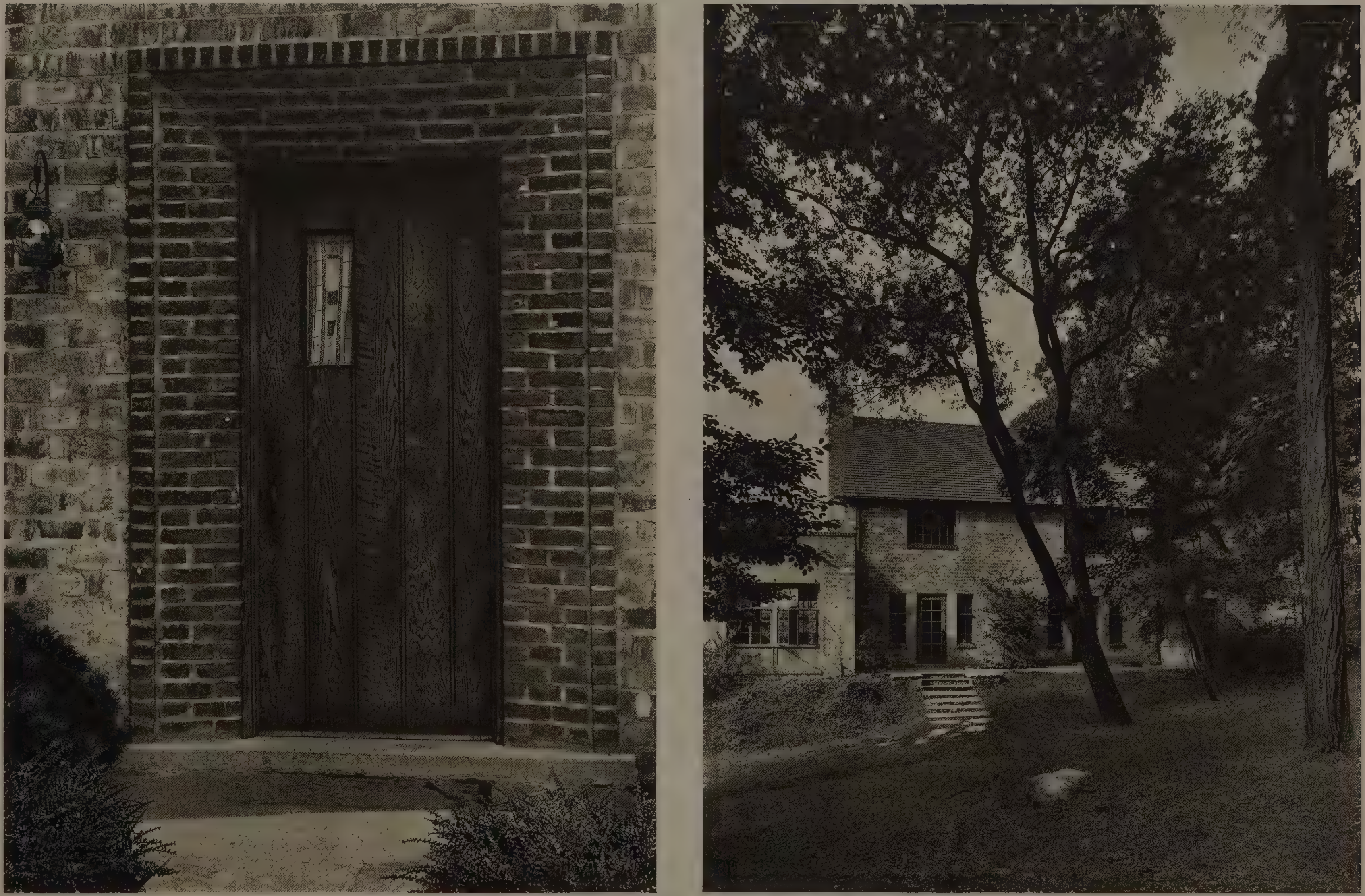
This house received first prize in the competition conducted in the interests of the Common Brick Association.



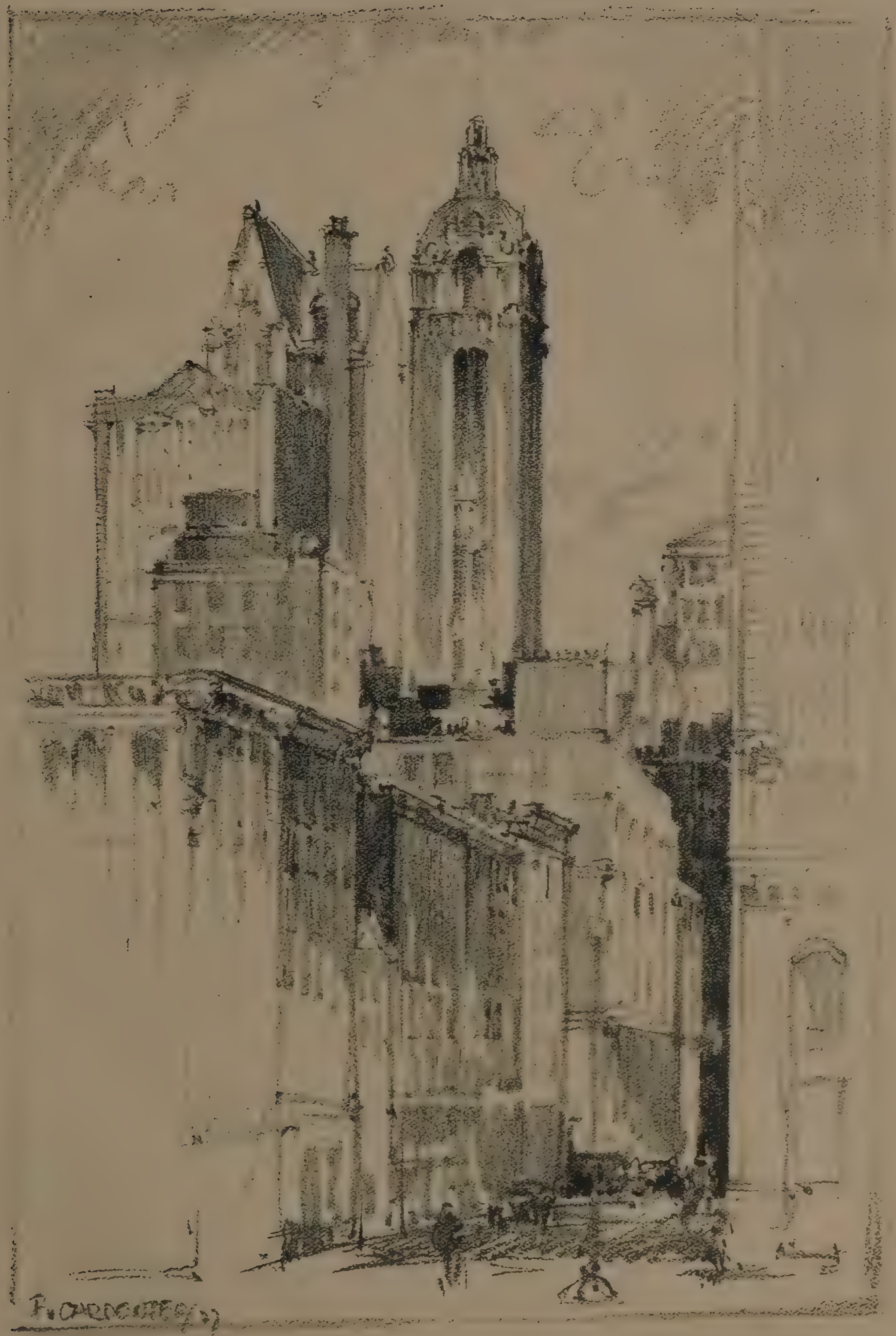
FIRST FLOOR PLAN



SECOND FLOOR PLAN

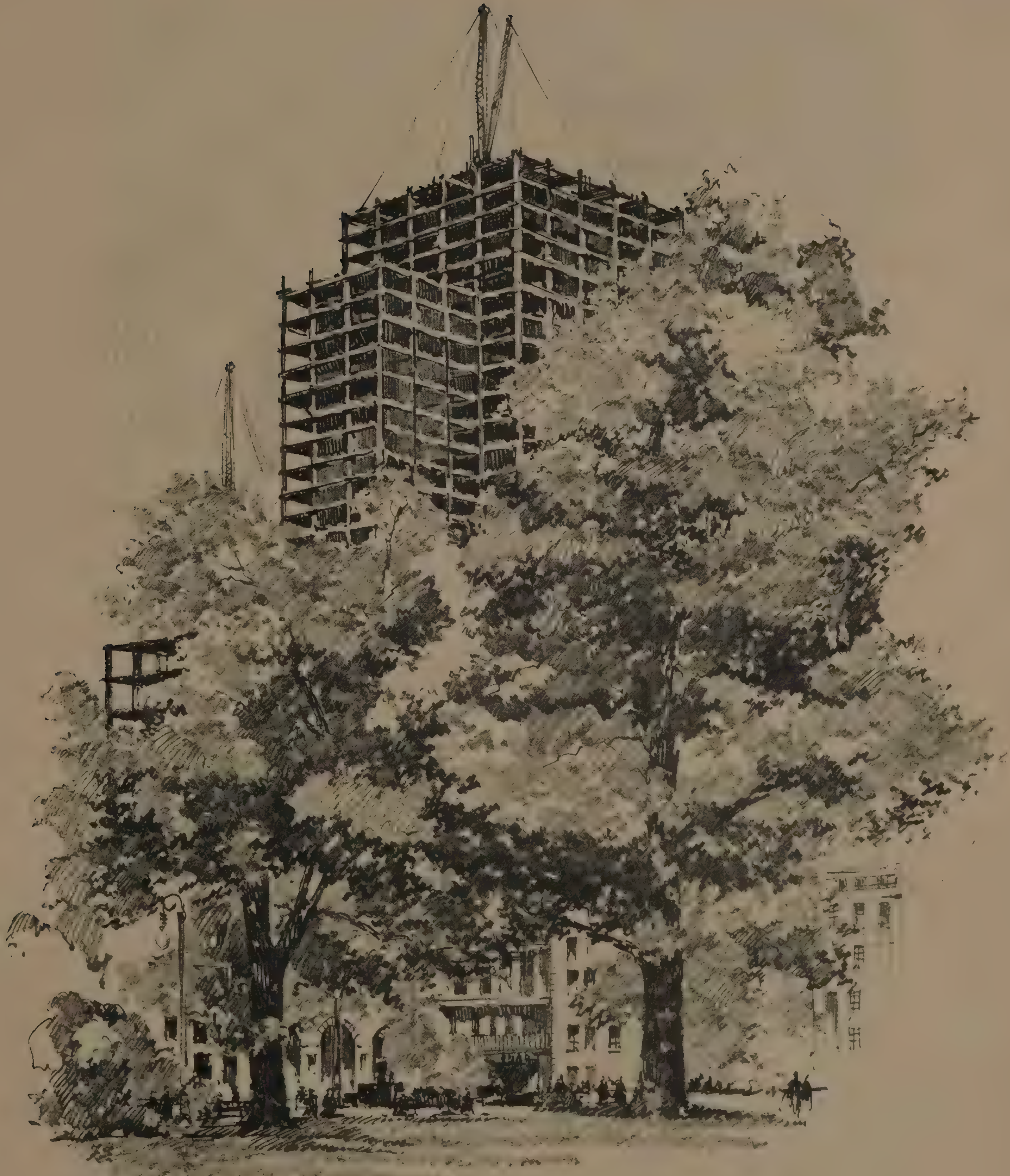


House of Paul Rie, Port Washington, Long Island
clarence s. stein, architect



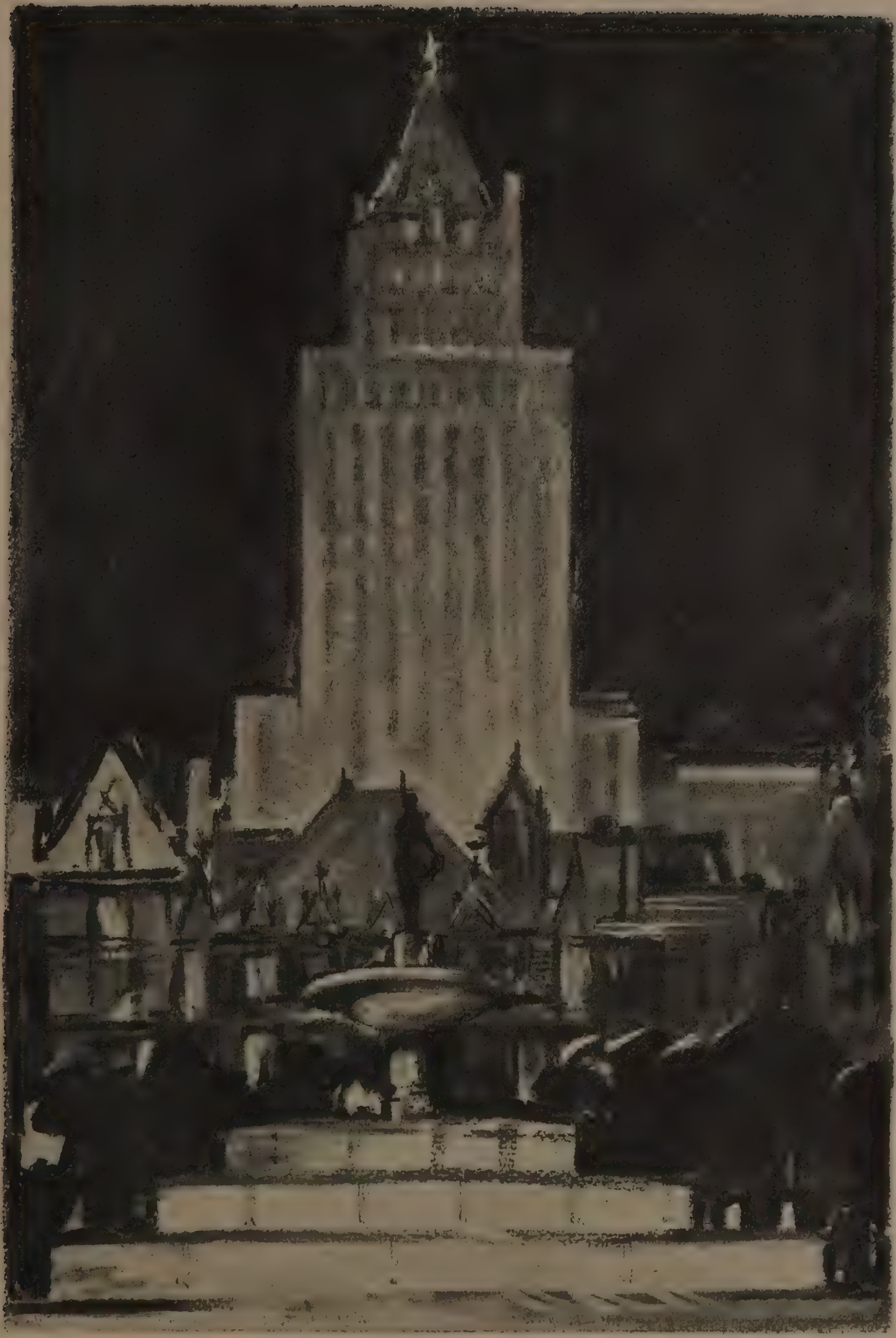
Down-Town New York Pencil Drawing by F. V. Carpenter

This and the following three drawings by Mr. Carpenter picture New York City of to-day with a particularly versatile pencil (and charcoal)



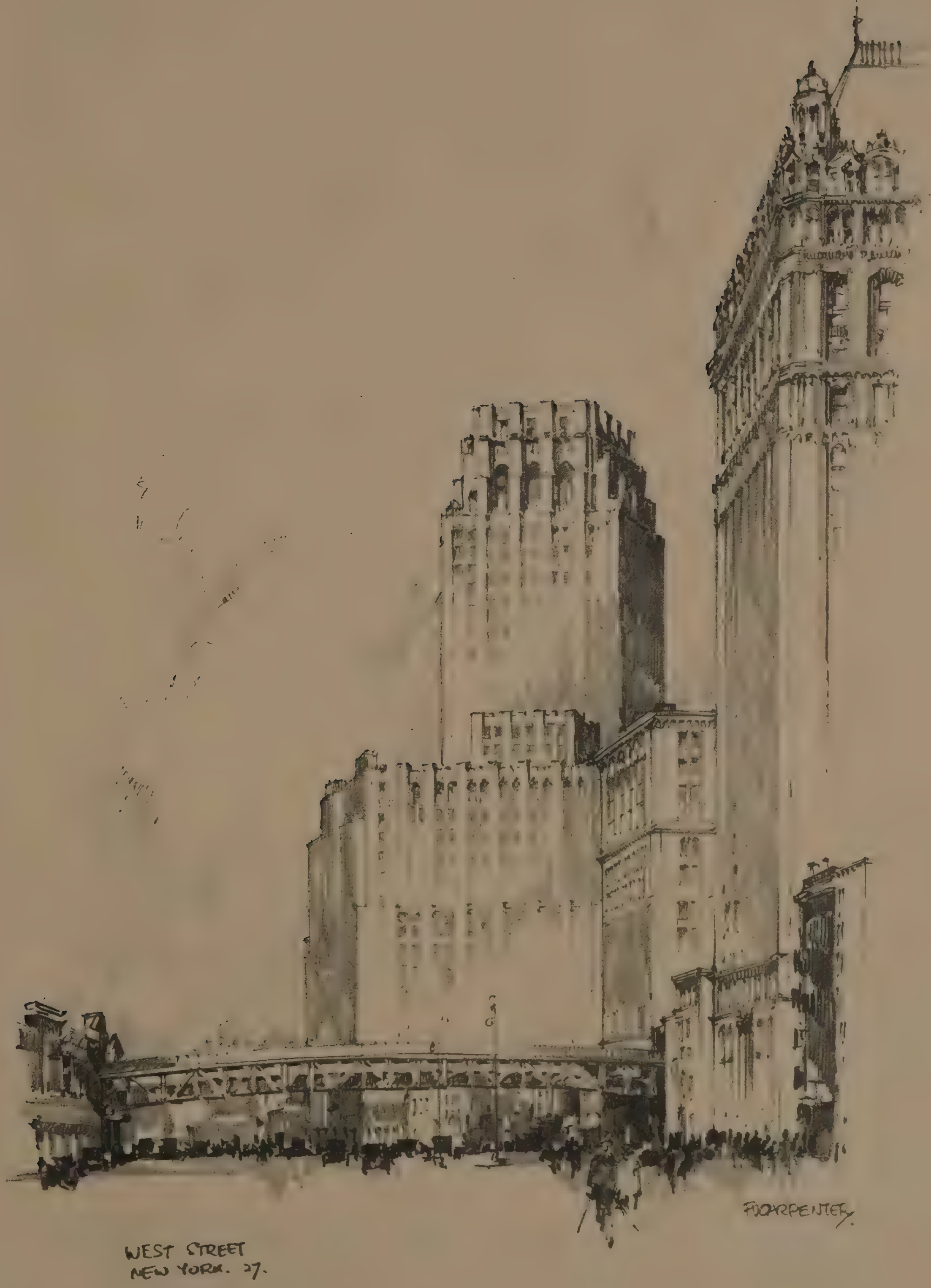
F.V. CARPENTER.

NEW YORK LIFE INSURANCE
BUILDING.
MADISON SQUARE. Aug. 1927.



THE PLAZA. (VANDERBILT HOUSE & HECKSHER BUILDING).
NEW YORK CITY.

P.U. CARPENTER/27.


WEST STREET
NEW YORK. 27.
F.J.CARPENTER.

Specifications for Water-Cement Ratio of Concrete

THE water-cement ratio-strength law may be stated roughly as follows:

"The strength of concrete is inversely proportional to the amount of water per sack of cement used for mixing, provided that the mix is a plastic, workable one, and that the aggregates are clean and hard."

From this it follows that the strength of concrete is controlled by fixing the amount of water used in mixing, and not by proportioning the cement, sand, and stone. In order to apply this law, specifications which give the proportions of cement and aggregates, but ignore the ratio of water to cement, must be superseded by modern ones in which the number of gallons of water to be used with each sack of cement are definitely stated.

The following specification for concrete shows how the water-cement ratio-strength law can be embodied in the directions to the contractor:

Water-Cement Ratio.—Concrete for structural members shall be proportioned to give the necessary workability without exceeding the following quantities of mixing-water for the strength indicated.

STRENGTH OF CONCRETE IN POUNDS PER SQUARE INCH SHOWN ON THE PLANS	U. S. GALLONS WATER PER SACK (94 POUNDS) OF CEMENT
3,000	6
2,500	6¾
2,000	7½
1,500	8¼

These water-cement ratios are the maximum permissible. The mixes shall be proportioned for somewhat lower ratios so that with the normal fluctuations from batch to batch these ratios will not be exceeded. Moisture held by the aggregate must be included in computing the water-cement ratios. Water absorbed by the aggregate in a period of thirty minutes may be deducted in computing the water-cement ratio.

The water-cement ratios specified shall not be changed except by the engineer. In the event that the engineer finds it necessary to change the water-cement ratios from those specified, adjustment covering amount of cement and aggregates affected will be made as an extra or a credit under the provisions of the contract.

Measuring Moisture in the Aggregate.—Moisture in the aggregate shall be measured by a method satisfactory to the engineer, which will give results within 1 pound for each 100 pounds of aggregate.

Concrete Proportions and Consistency.—The proportions of aggregate to cement for concrete of the water-cement ratios specified shall be such as to produce concrete that can be puddled readily into the corners and angles of the form and around the reinforcement without excessive spading and without segregation or undue accumulation of water or laitance on the surface. In no case shall concrete be placed which shows a slump outside of the following limits:

PART OF STRUCTURE	SLUMP-INCHES MINIMUM	SLUMP-INCHES MAXIMUM
Caissons	1	4
Heavy walls, slabs, beams	3	7
Thin walls and columns	4	8

The proportion of fine and coarse aggregate shall be such that the ratio of the coarse to the fine shall not be less than ——* nor more than ——* nor shall the amount of coarse material be such as to produce harshness in placing or in honeycombing the structure. When forms are removed, the surface and corners of the members shall be smooth and sound throughout.

Control of Proportions.—The methods of measuring materials shall be such that the proportion of water to cement can be closely controlled during the progress of the work and easily checked at any time by the engineer or his representative.

To avoid unnecessary or haphazard changes in consistency, the aggregates shall be obtained from a source which will insure uniform quality and grading during any single day's operation, and they shall be delivered to the work and handled in such a manner that variations in moisture content will not interfere with the steady production of concrete of a reasonable degree of uniformity.

Tests of Concrete.—Frequent tests may be made by the engineer throughout the work to determine the quality of concrete. These tests will be made at the expense of the owner, and will, in general, be made on 6 by 12-inch concrete cylinders loaded in compression at 7 and 28 days, in accordance with the "Standard Method of Making and Storing Specimens of Concrete in the Field" (Serial Designation: C31–21) of the American Society for Testing Materials.

The contractor shall co-operate in every way to the end that concrete of the desired quality be obtained. He shall provide, at cost, such housing as may be required for testing equipment and storage of test specimens: such cost to include only labor and materials actually used.

Portland Cement.—Portland cement shall conform to the "Standard Specifications and Tests for Portland Cement of the American Soceity for Testing Materials" (Serial Designation: C9–26).

Fine Aggregate.—Fine aggregate shall consist of natural sand having clean, hard, strong, durable, uncoated grains, free from injurious amounts of dust,

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* The following limits in the proportion of coarse to fine aggregate are suggested:

MAXIMUM SIZE OF COARSE AGGREGATE INCHES	RATIO OF COARSE TO FINE AGGREGATE ON BASIS OF DRY AND RODDED VOLUMES MINIMUM	RATIO OF COARSE TO FINE AGGREGATE ON BASIS OF DRY AND RODDED VOLUMES MAXIMUM
⅜	0.4	0.8
¾	0.6	1.5
1 and over	1.0	2.0

lumps, soft or flaky particles, shale, alkali, organic matter, loam or other deleterious substances. The sand shall be of such sizes that it shall all pass a 3/8-inch sieve, at least 15 per cent shall be retained on the No. 8 sieve, and the fineness modulus shall not exceed 3.20.

Coarse Aggregate.—Coarse aggregate shall consist of gravel, crushed stone, crushed air-cooled blast-furnace slag weighing not less than 70 lbs. per cu. ft., or other approved inert materials, having clean, hard, strong, durable, uncoated particles free from injurious amounts of soft, friable, thin elongated or laminated pieces, alkali, organic or other deleterious matter. Coarse aggregate shall not have more than 10 per cent finer than the No. 4 sieve and the maximum size shall not exceed ——.

Storage of Aggregate.—Aggregates shall be stored so as to avoid inclusion of foreign materials. Frozen aggregate or aggregate containing lumps of frozen materials shall be thawed before using.

Water.—Water for concrete shall be from the city water supply or other approved source.

Mixing Concrete.—The concrete shall be thoroughly mixed in a batch mixer of approved type. The mixer shall be equipped with suitable charging hopper. A water-storage and water-measuring device shall be provided. The mixing of each batch shall continue for at least one minute after all the materials are in the mixer, during which time the mixer shall rotate at a peripheral speed of approximately 200 feet per minute.

Depositing Concrete.—Concrete shall be handled from the mixer to place as rapidly as practicable and in a manner that will prevent segregation of the ingredients. It shall be deposited in the forms as nearly as practicable in its final position to avoid rehandling. Concrete as it is deposited shall be puddled with suitable tools until forms are completely filled and reinforcement and embedded fixtures thoroughly incorporated in the mass.

Concrete shall be deposited continuously and as rapidly as practicable until the unit of operation, approved by the engineer, is completed.

Concrete when deposited shall have a temperature of not less than 40 degrees F. and not more than 120 degrees F. In freezing weather suitable means shall be provided for maintaining the concrete at a temperature of at least 50 degrees F. for 72 hours or more after placing, or until the concrete has thoroughly hardened. The methods of heating the materials and protecting the concrete shall be approved by the engineer. Salt, chemicals, or other foreign materials shall not be mixed with the concrete for the purpose of preventing freezing.

Protection of Concrete.—Exposed surfaces of concrete shall be protected from drying for a period of at least seven days after being deposited.

BOOK REVIEWS

THE ARCHITECT IN HISTORY. By Martin S. Briggs, F. R. I. B. A. 400 pages, 5 by 7½ inches. 46 illustrations. Printed in England. New York: 1927: Oxford University Press, American Branch. $3.75.

A scholarly effort to claim for the architect the position in history that is his due. Up to the end of the Middle Ages the author deals with the evolution of the architect in Europe generally; during the Renaissance, in Italy, France, and England; during the nineteenth century, in England alone.

ENGLISH GOTHIC CHURCHES: The Story of Their Architecture. By Charles W. Budden, M.A., M.D. 146 pages, 5 by 7¼ inches, and 40 plates from photographs and drawings; with numerous plans, etc., in the text pages. Printed in England. New York: 1927: Charles Scribner's Sons. $2.75.

Doctor Budden is editor of *The Liverpool Review* and author of "Old English Churches," "The Beauty and Interest of Wirral," etc. His chief purpose in this book was to clear up for the traveller the puzzling matters of architectural period variations as well as the underlying purpose and the development of architectural forms in English churches. The architect, however, will by no means find the little volume too elementary or too much a layman's book to bring him interest and a great deal of information that would be hard to find elsewhere.

ENGLISH HOMES. PERIOD III.—VOL. II. Late Tudor and Early Stuart, 1558–1649. By H. Avray Tipping, M.A., F. S. A. 443 pages, 10½ by 15½ inches, with 538 illustrations from photographs and plans. Printed in England. New York: 1927: Charles Scribner's Sons. $25.

Considerable as was the development of comfort and convenience, of dignity and spaciousness, in the designing of country-seats under Queen Elizabeth, these qualities grew, in the reign of James I, into the full flowering of the English Renaissance. Apethorpe, Audley End, Batemans, Bramshill, Castle Ashby, Deene Park, Hatfield House, Rushton Hall, Somerhill—these glorious piles and a score of others, that were the very soul of sixteenth and seventeenth century England—are pictured in the perfection of photography and large, exquisitely detailed half-tone plates. Mr. Tipping's series of seven volumes on English Homes takes its place as the definitive work on the subject. It would be difficult to conceive of its being done more comprehensively or more beautifully.

HOW TO DISTINGUISH PRINTS. Written and illustrated by members of The Print Society, and edited by Hesketh Hubbard, R. O. I., R. B. A., A. R. W. A. 128 pages, 8½ by 11 inches, with numerous illustrations in black-and-white and color. Printed in England. Woodgreen Common, Wiltshire, England: 1926: The Print Society. $6, postpaid to America.

A particularly ingenious presentation of sixteen of the most commonly used ways of making prints. Each method, described by a proficient artist, is accompanied by a characteristic example and microphotographs of a small portion of both the plate itself and the print. These latter may well serve for many pages of letterpress upon the differences between, for example, a chalk lithograph and a sandgrain etching.

ARCHITECTURE'S PORTFOLIO
OF
CIRCULAR *and* OVAL WINDOWS

BASED UPON CLASSIC AND RENAISSANCE TYPES

Subjects of Previous Portfolios

STAIRWAY DETAILS (GEORGIAN, EARLY AMERICAN, ETC.)
February, 1927

PANELLING OF THE ENGLISH TYPES
January, 1927

STONE MASONRY TEXTURES
March, 1927

FANLIGHTS AND OTHER OVERDOOR TREATMENTS
May, 1927

DOOR HARDWARE
August, 1927

TEXTURES OF BRICKWORK
June, 1927

IRON RAILINGS
July, 1927

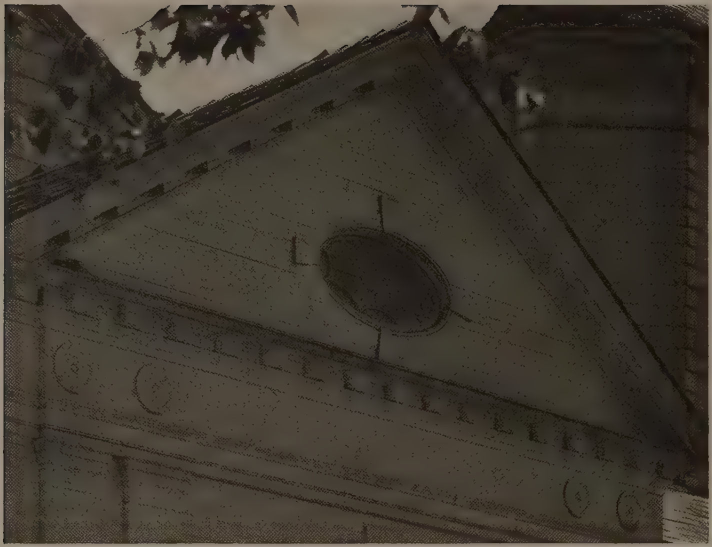
ENGLISH CHIMNEYS
April, 1927

GABLE ENDS
October, 1927

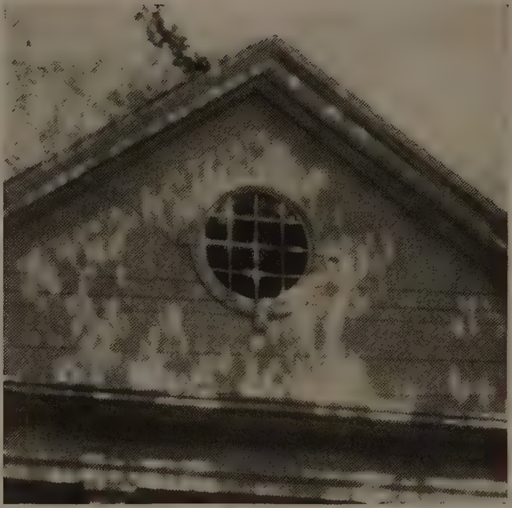
PALLADIAN MOTIVES
September, 1927

SUBJECTS IN PREPARATION FOR FUTURE ISSUES

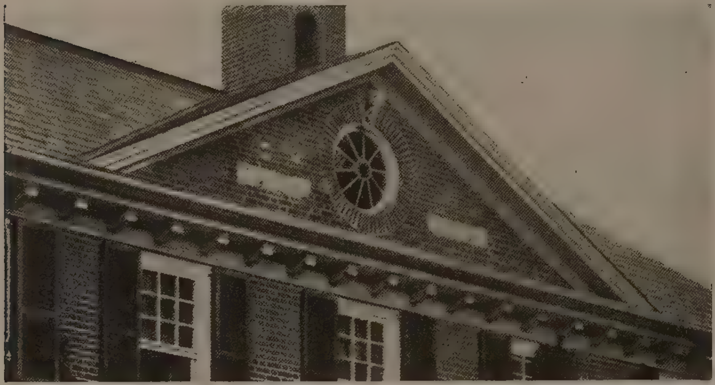
Beamed Ceilings
Built-in Bookcases
Chimney Tops
Bay Windows
Leaded Glass Medallions
Cornices of Wood
Decorative Plaster Ceilings
Garden Steps
English Fireplaces
Floors of Wood
Elevator Doors
Garden Gates
Garden Walls
Rain-conductor Heads
Stucco Textures
Treillage



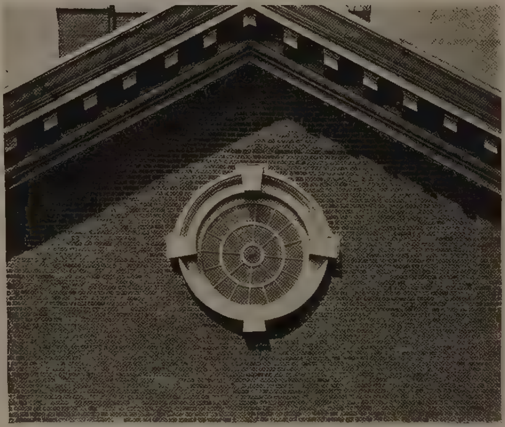
BOHNARD & PARSSON



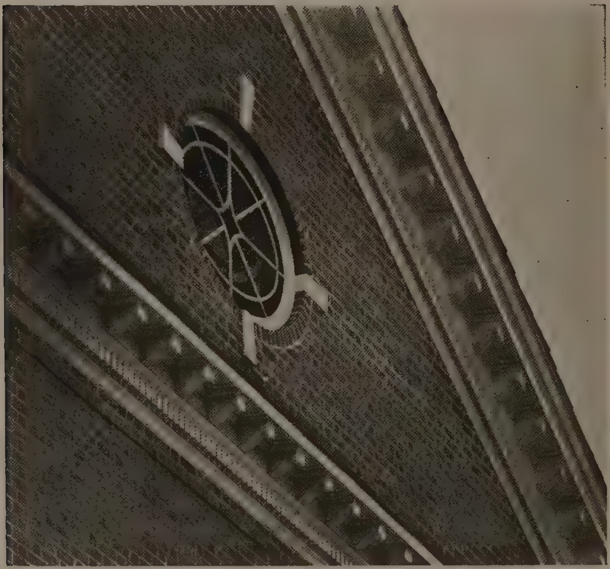
FOSTER & VASSAR



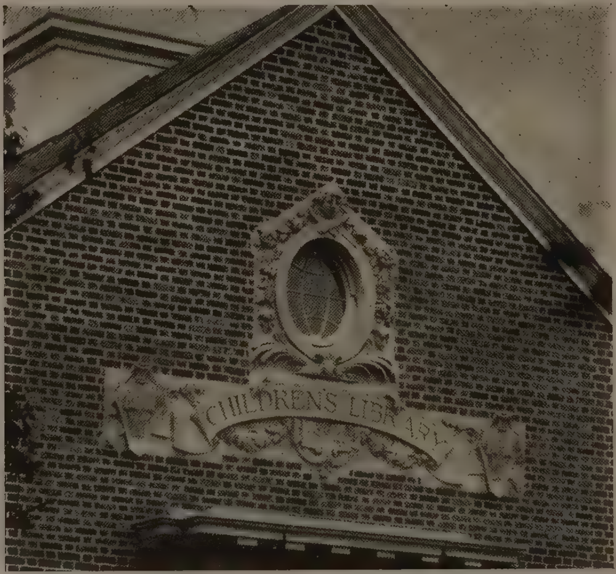
TULIP HILL, MD. CIRCA 1750



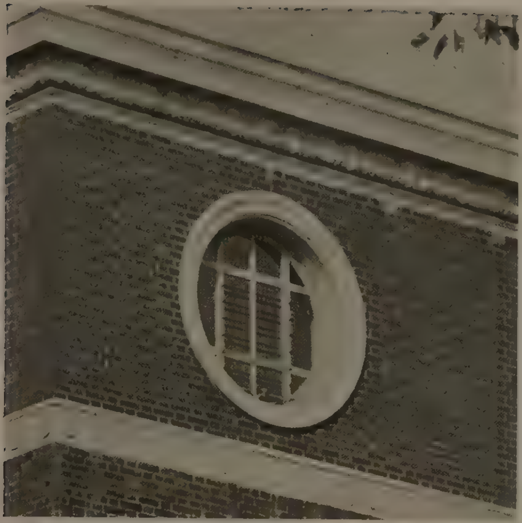
ST. PETER'S, PHILADELPHIA



DELANO & ALDRICH



PEABODY, WILSON & BROWN



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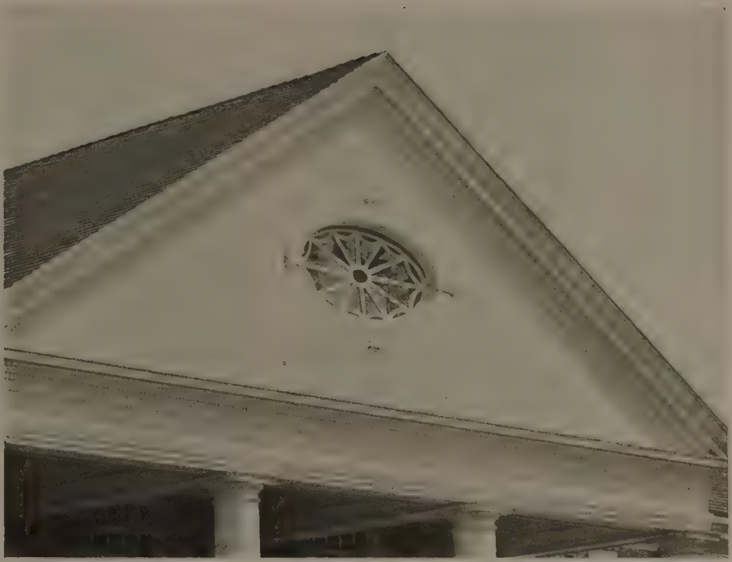
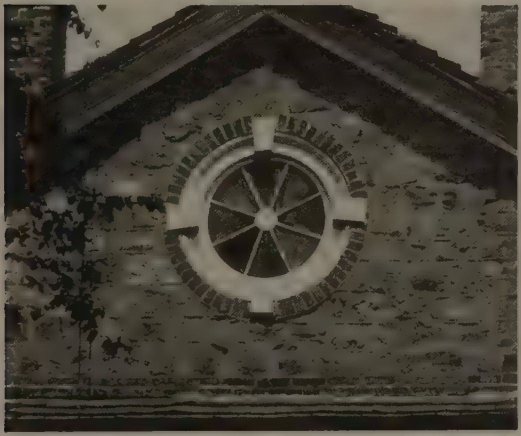
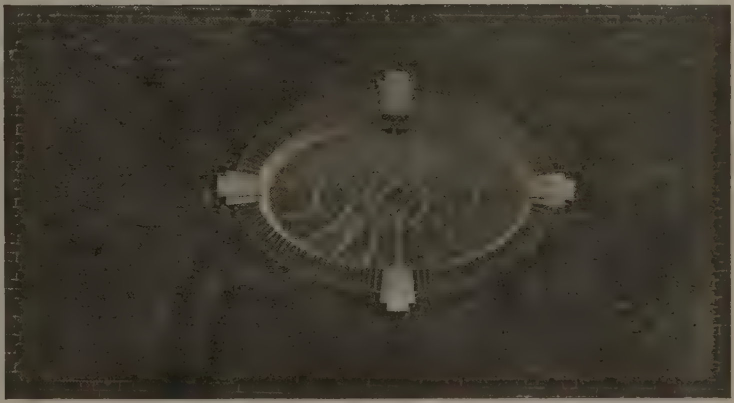


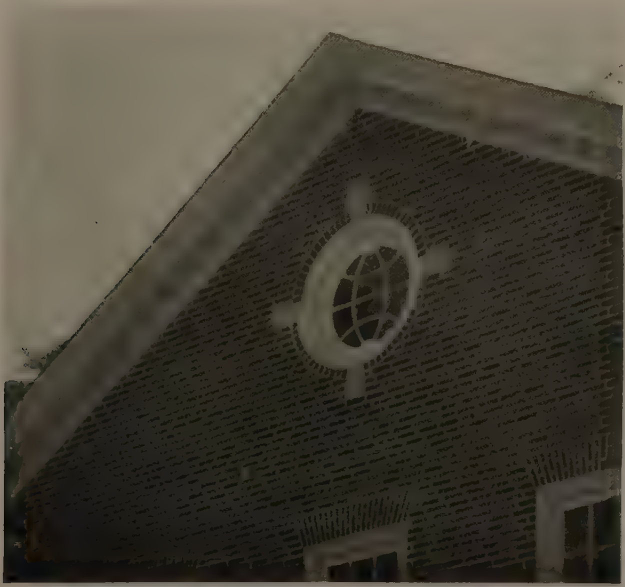
FREDERICK STERNER



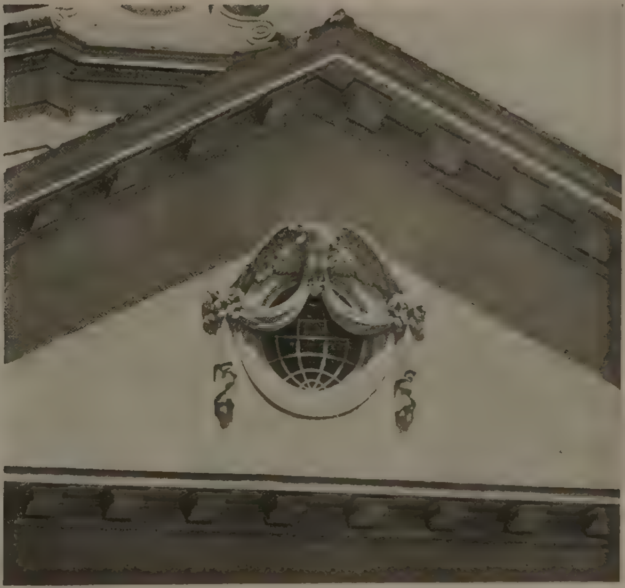
WASHINGTON'S HEADQUARTERS, VALLEY FORGE



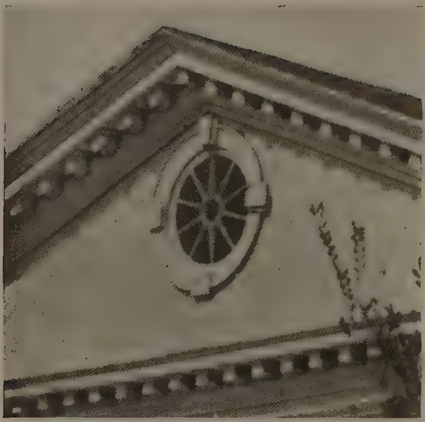
EARLY AMERICAN



PEABODY, WILSON & BROWN

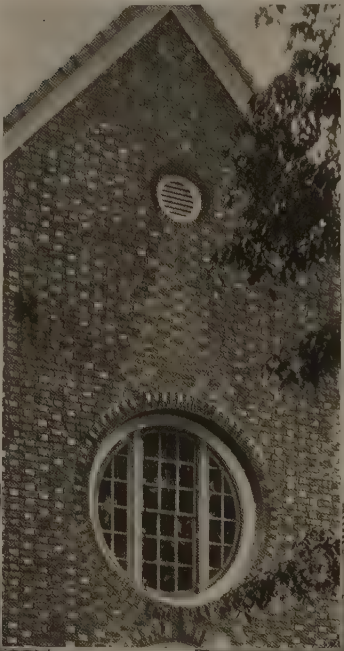


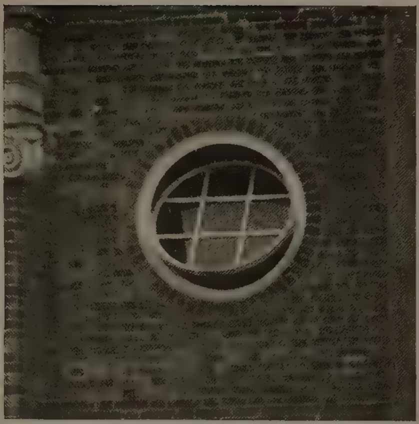
LEONARD ASHEIM



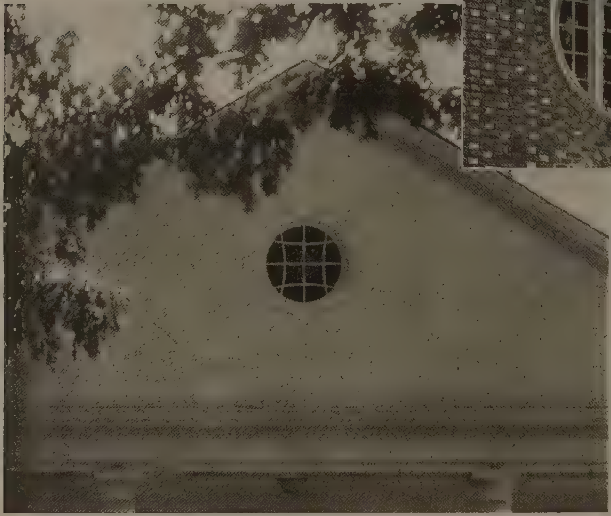
CHARLESTON, S. C.

BRUTON CHURCH, WILLIAMSBURG.

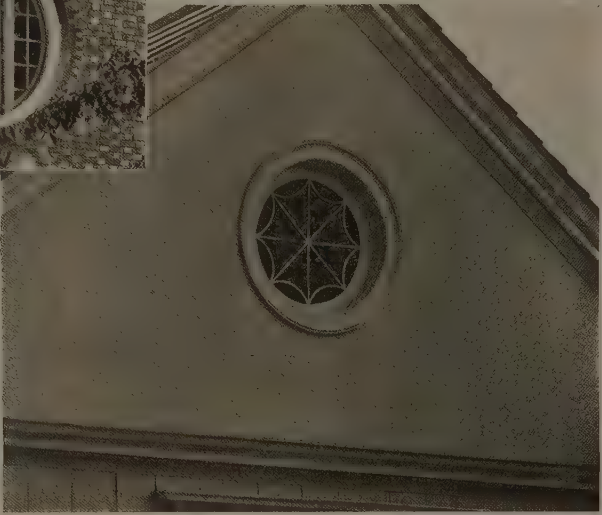




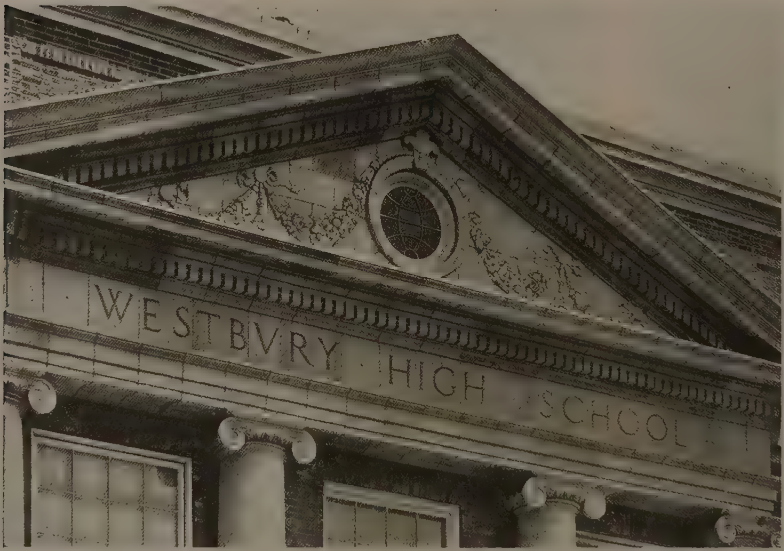
A. BULLOCH (EVESHAM, ENGLAND)



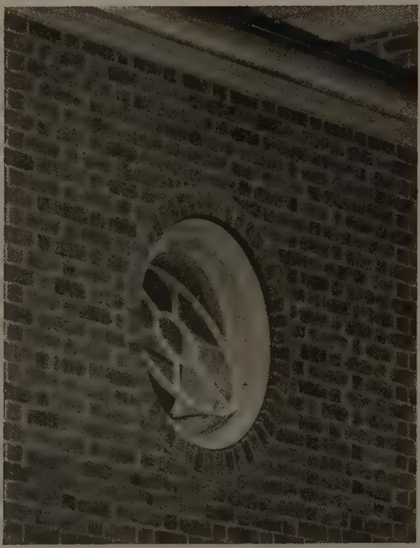
BARBER & McMURRY



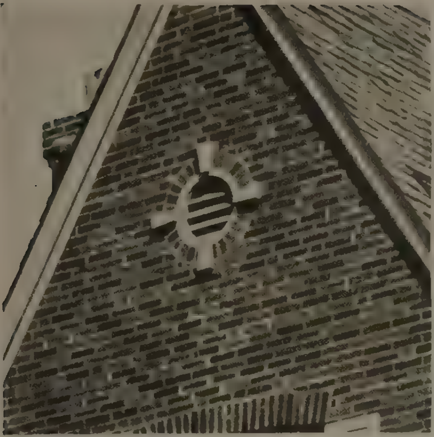
CHARLES S. KEEFE



PEABODY, WILSON & BROWN

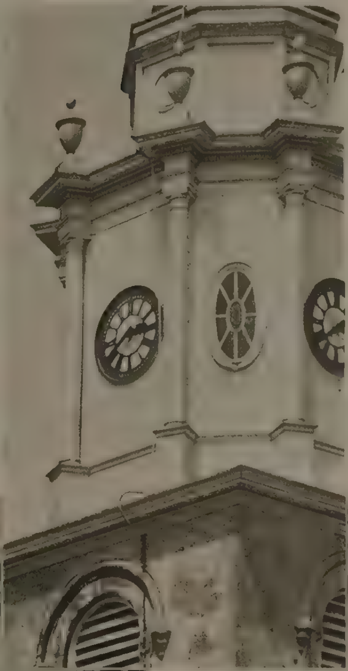


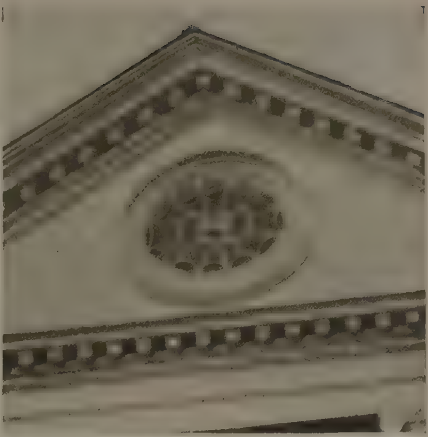
DELANO & ALDRICH



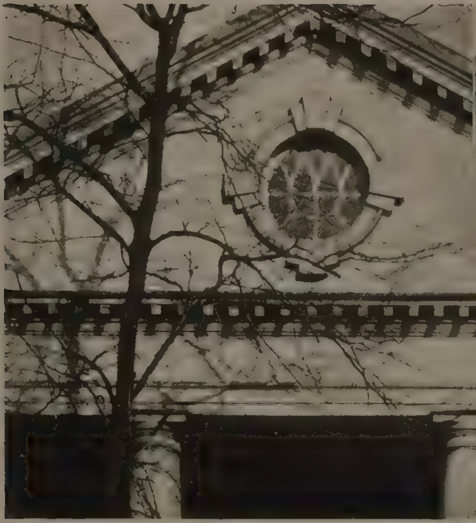
C. F. & D. E. McAVOY

FLATBUSH, BROOKLYN. 1794

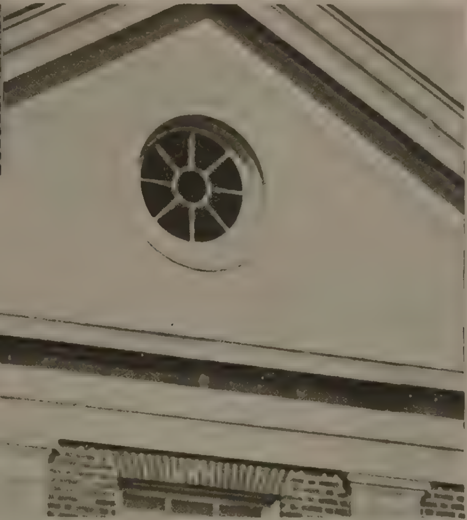




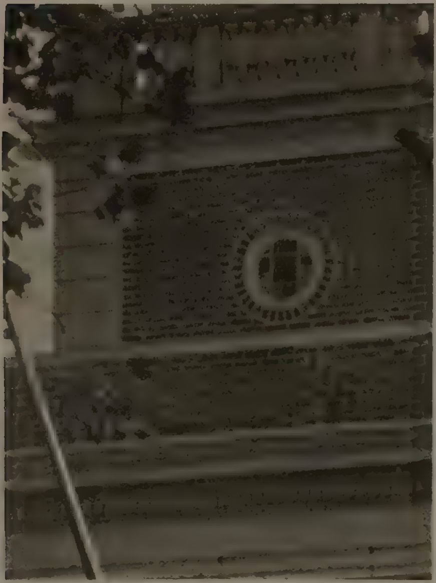
PRINGLE HOUSE, CHARLESTON. 1765



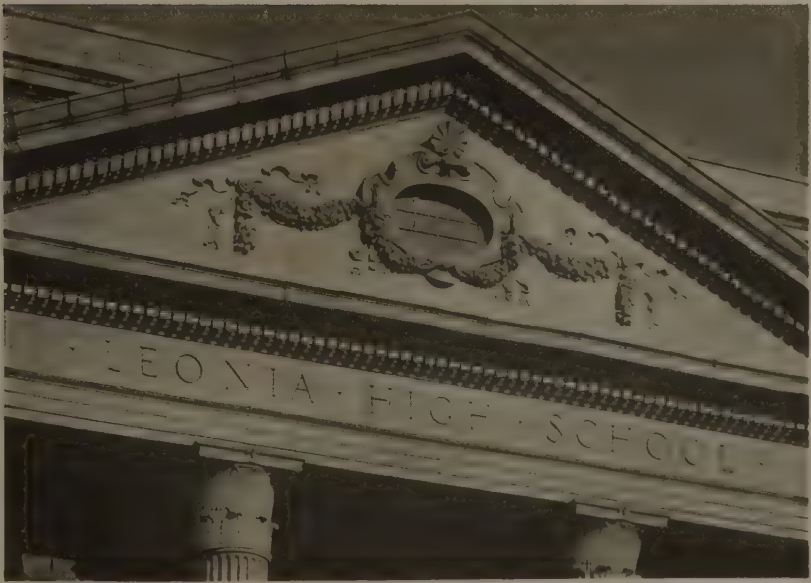
EARLY PHILADELPHIA



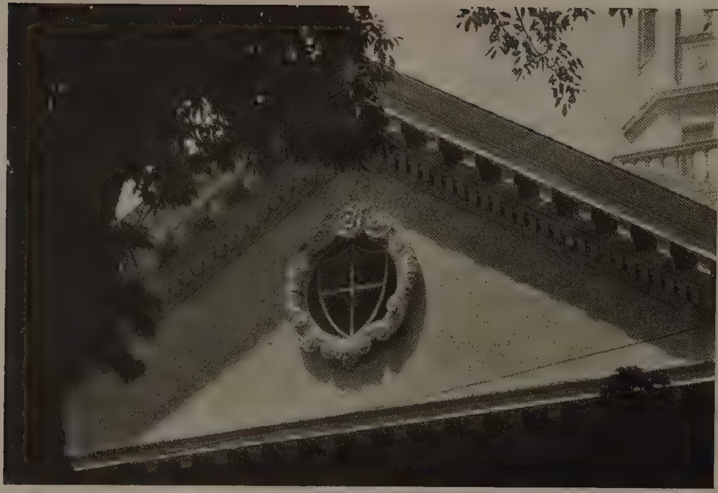
McKIM, MEAD & WHITE



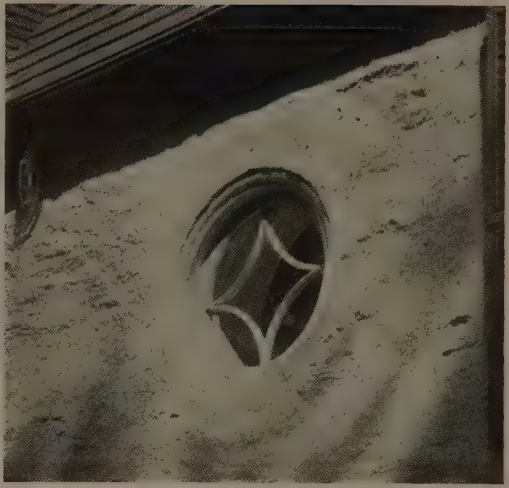
FELLHEIMER & WAGNER



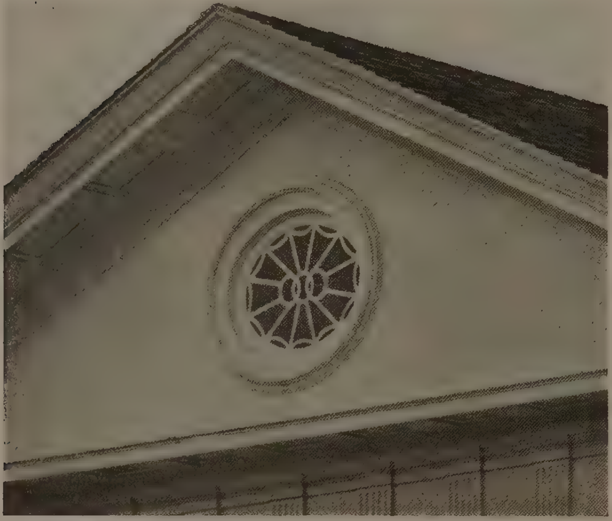
ERNEST SIBLEY



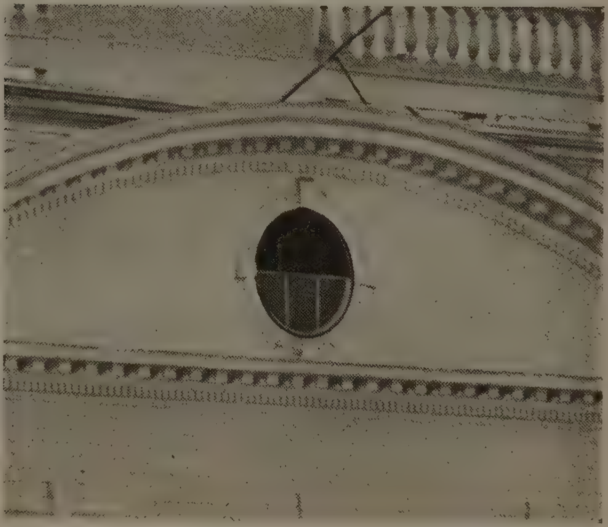
HENRY C. HOPKINS



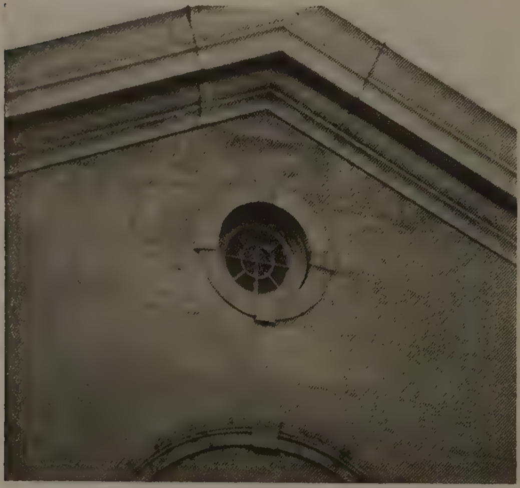
TILDEN & REGISTER



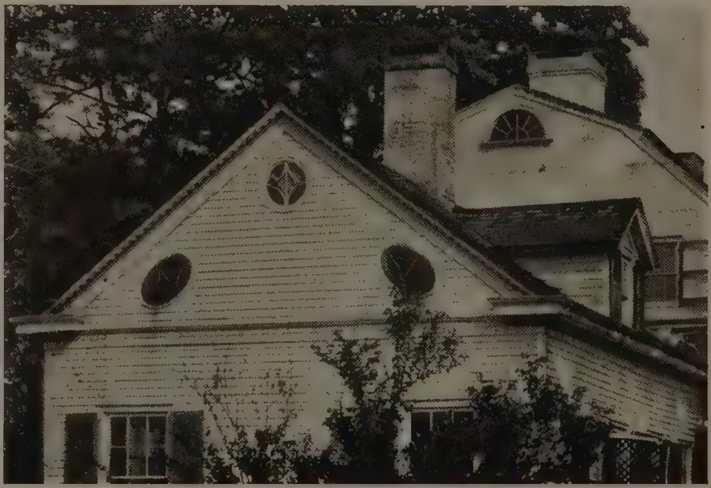
ROGERS & ZOGBAUM



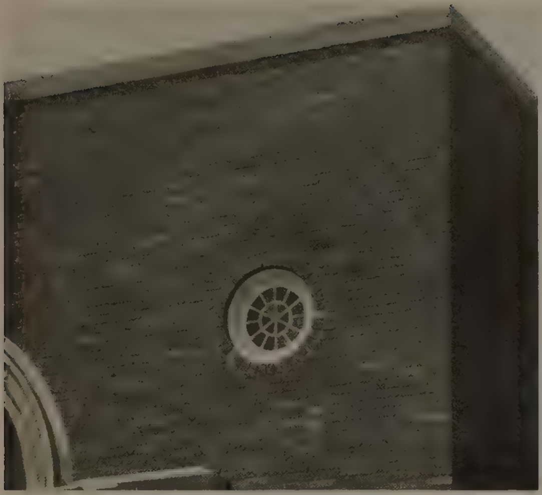
LITTLE & BROWNE



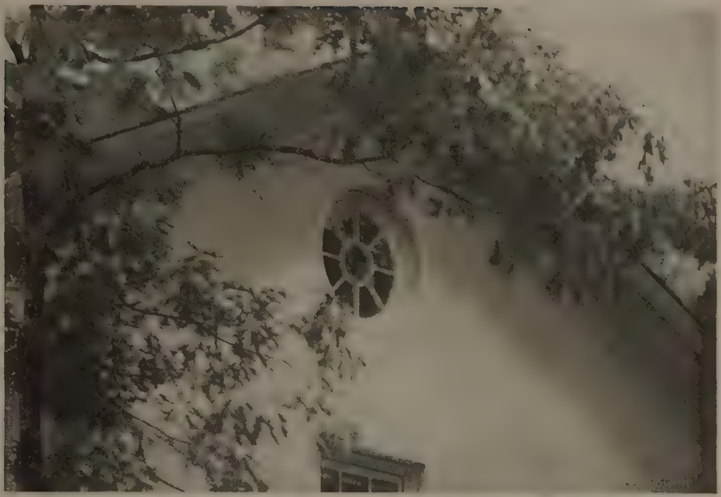
WALKER & WEEKS



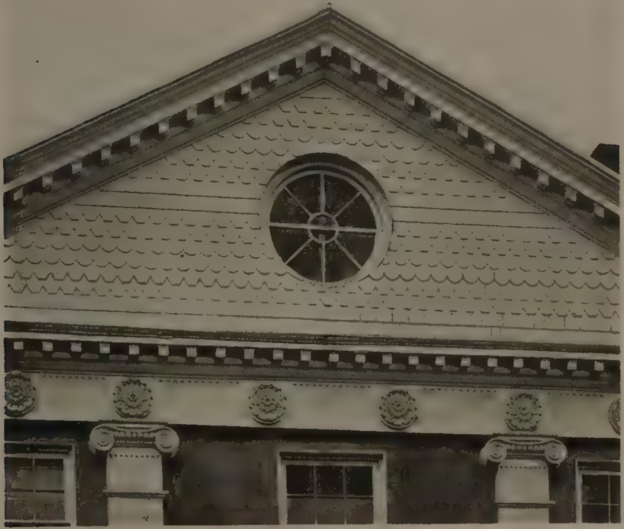
OLD BOARD HOUSE, NORTHERN NEW JERSEY



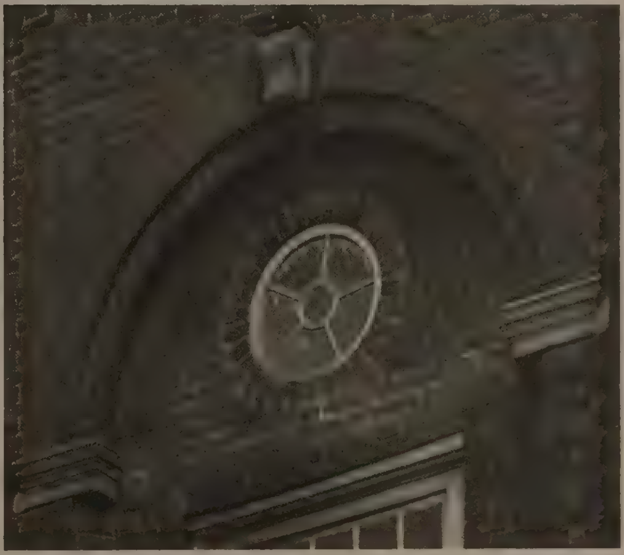
NEVIN, WISCHMEYER & MORGAN



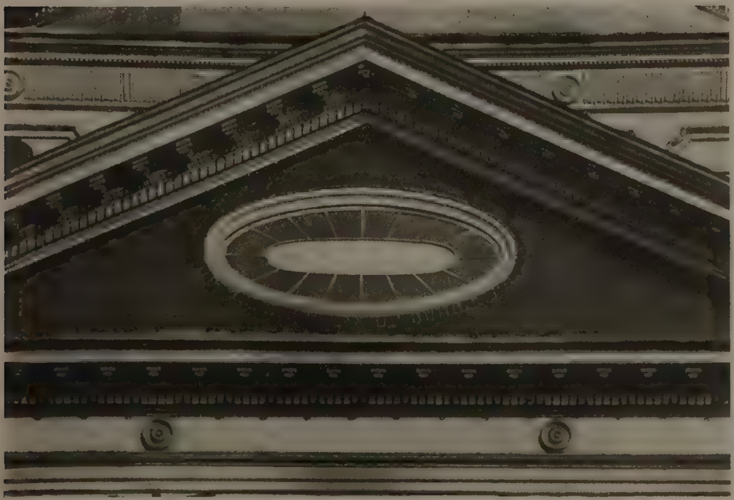
HENTZ, ADLER & SCHUTZ



WOODLANDS, PHILADELPHIA. 1770



OLD CHRIST CHURCH, PHILADELPHIA



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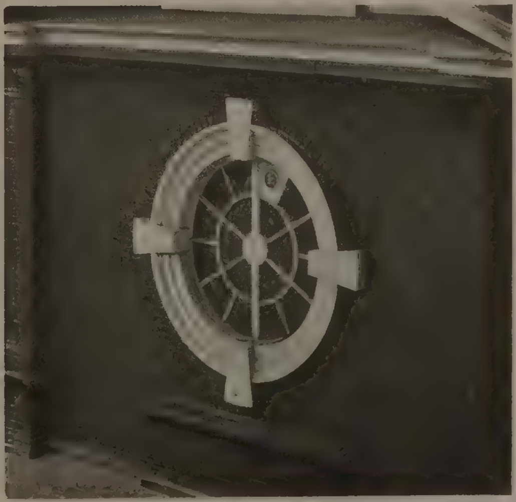
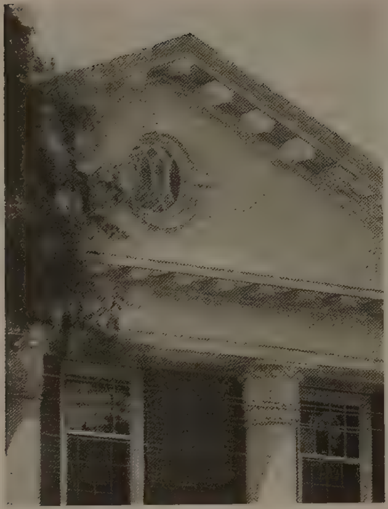
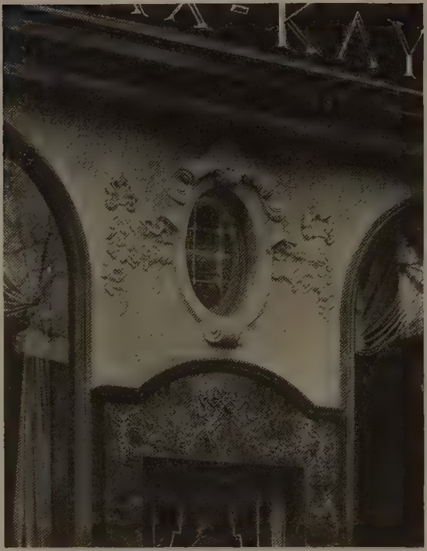


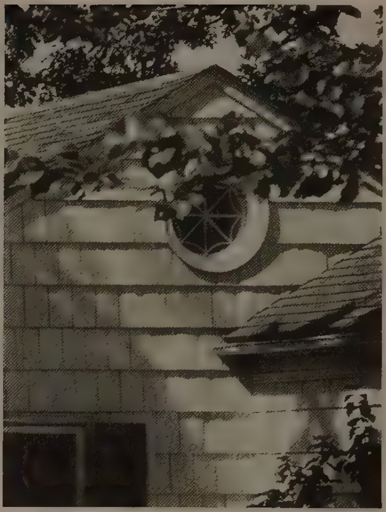
INDEPENDENCE HALL, PHILADELPHIA



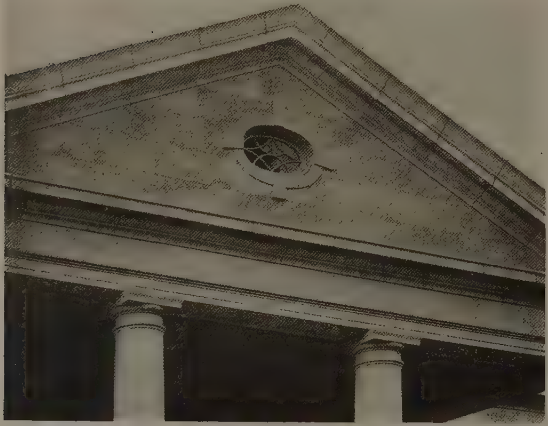
ALLEN & COLLENS



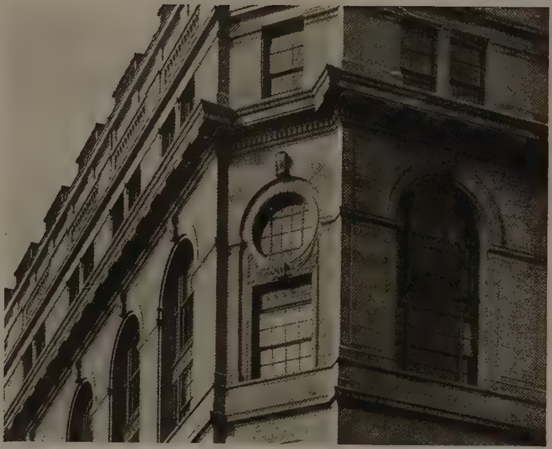
LANCELOT SUKERT



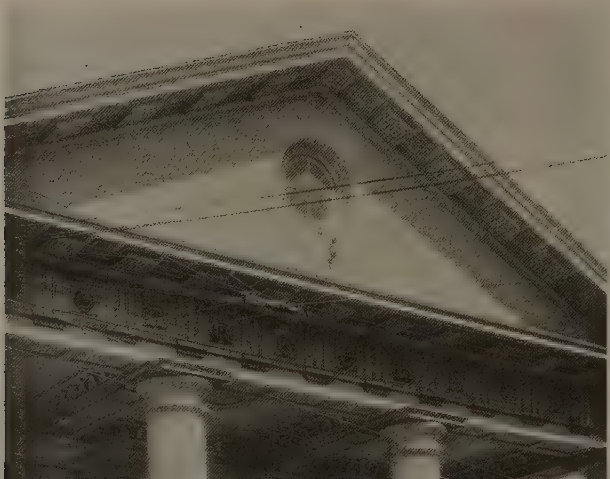
ALFRED HOPKINS



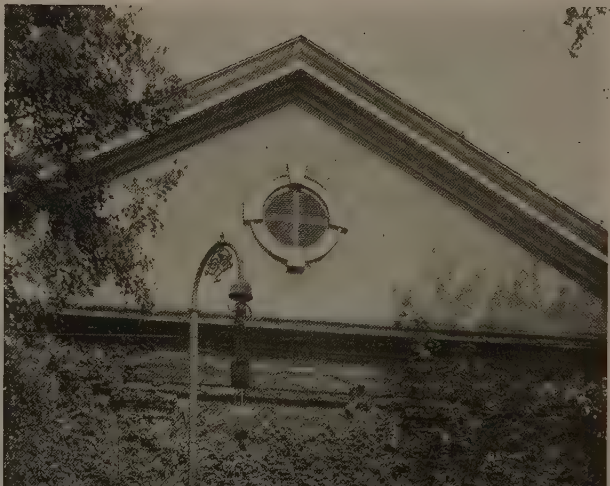
WALKER & WEEKS



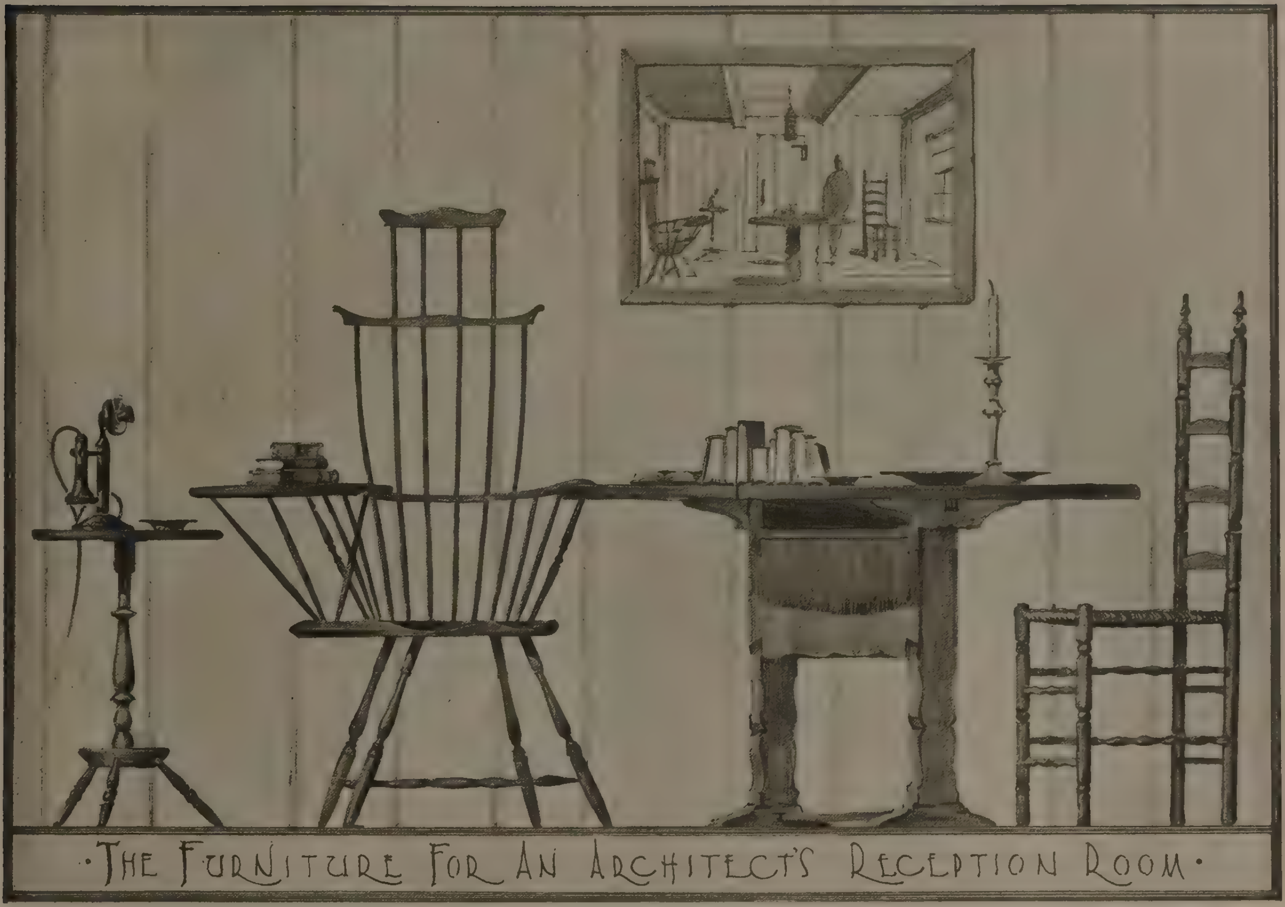
WALTER B. CHAMBERS



ST. MICHAEL'S, CHARLESTON



OLD ST. PETER'S, PHILADELPHIA


·THE FURNITURE FOR AN ARCHITECT'S RECEPTION ROOM·

Design Awarded First Prize — By Anthony Thormin, Cleveland, Ohio

ARCHITECTURE'S Competition VIII
Report of the Judges

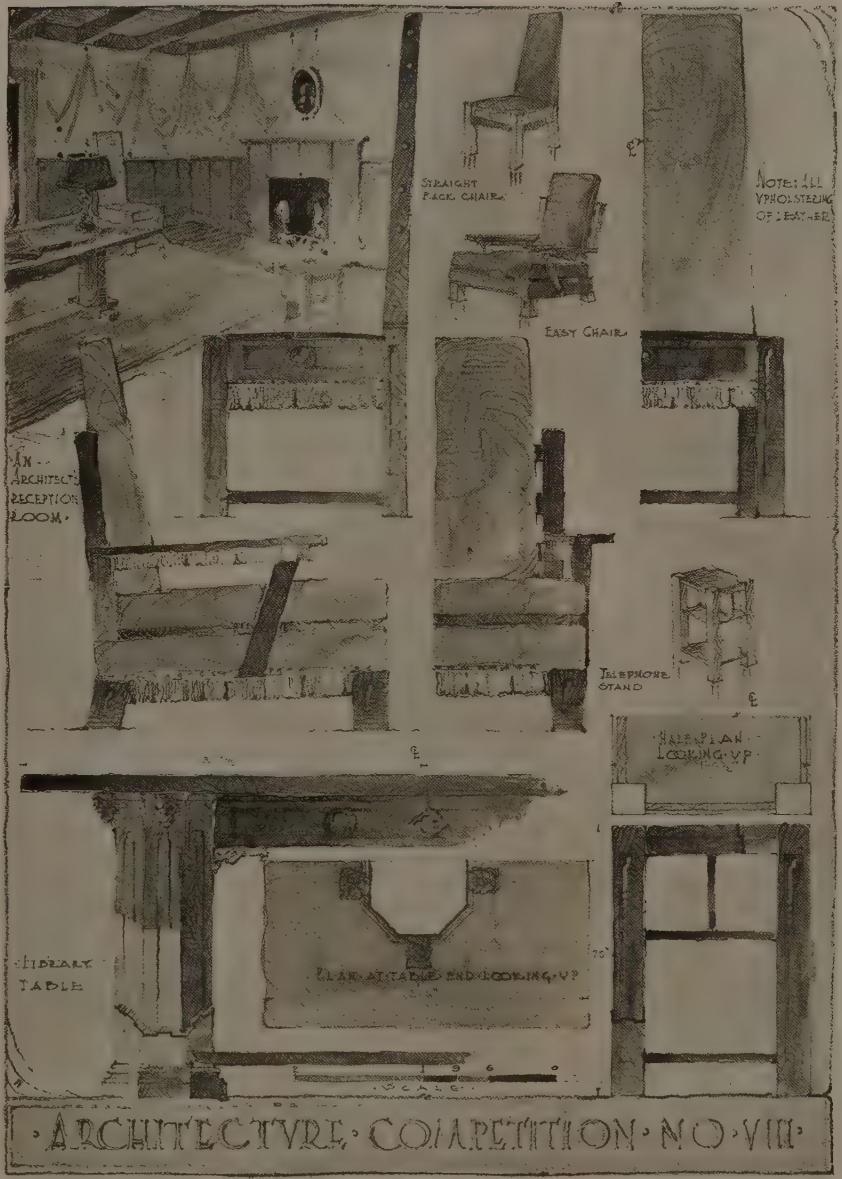
THE judges take pleasure in awarding the prizes for Competition VIII to the contestants listed below. It will be recalled that the programme for this competition read as follows:

"The furniture for an architect's reception-room adjoining his main library and consultation-room. The size is 10 by 15 feet, 8 feet high. There are needed: a table, two straight-back chairs, one more comfortable chair, and a telephone-stand. Show furniture preferably at 1½-inch scale and a sketch perspective of interior. There is a door on either side of the room, in the centre, and a window at one end."

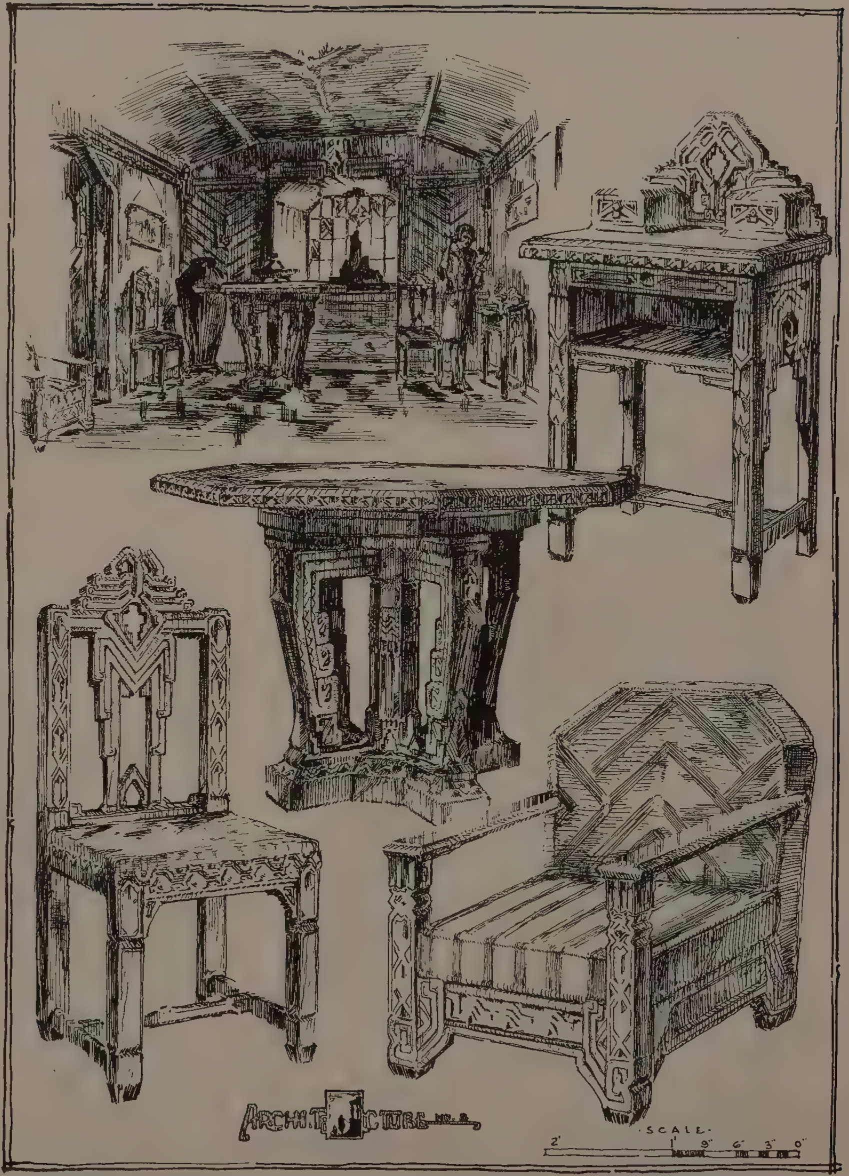
First Prize—Anthony Thormin, Cleveland, Ohio. Second Prize—Hilyard Robert Robinson, Washington, D. C. Third Prize—Samb Seiichi Washizuka, Detroit, Mich. Fourth Prize—Manuel Tapia Ruano, Havana, Cuba. Fifth Prize—Thomas A. Cresswell, Chicago, Ills.

This problem seemed to prove a particularly popular one, since the number of entries was in excess of any previous competition in the series. The judges had hoped that there might be in a considerable number of the entries a fresh note in the design of the furniture. This hope was not realized. In most cases the contestants were satisfied to develop one of the accepted furniture types to conform to the programme's requirements. Two of the prize-winners, however, did follow architectural lines from the Greek and Aztec to achieve new furniture forms.

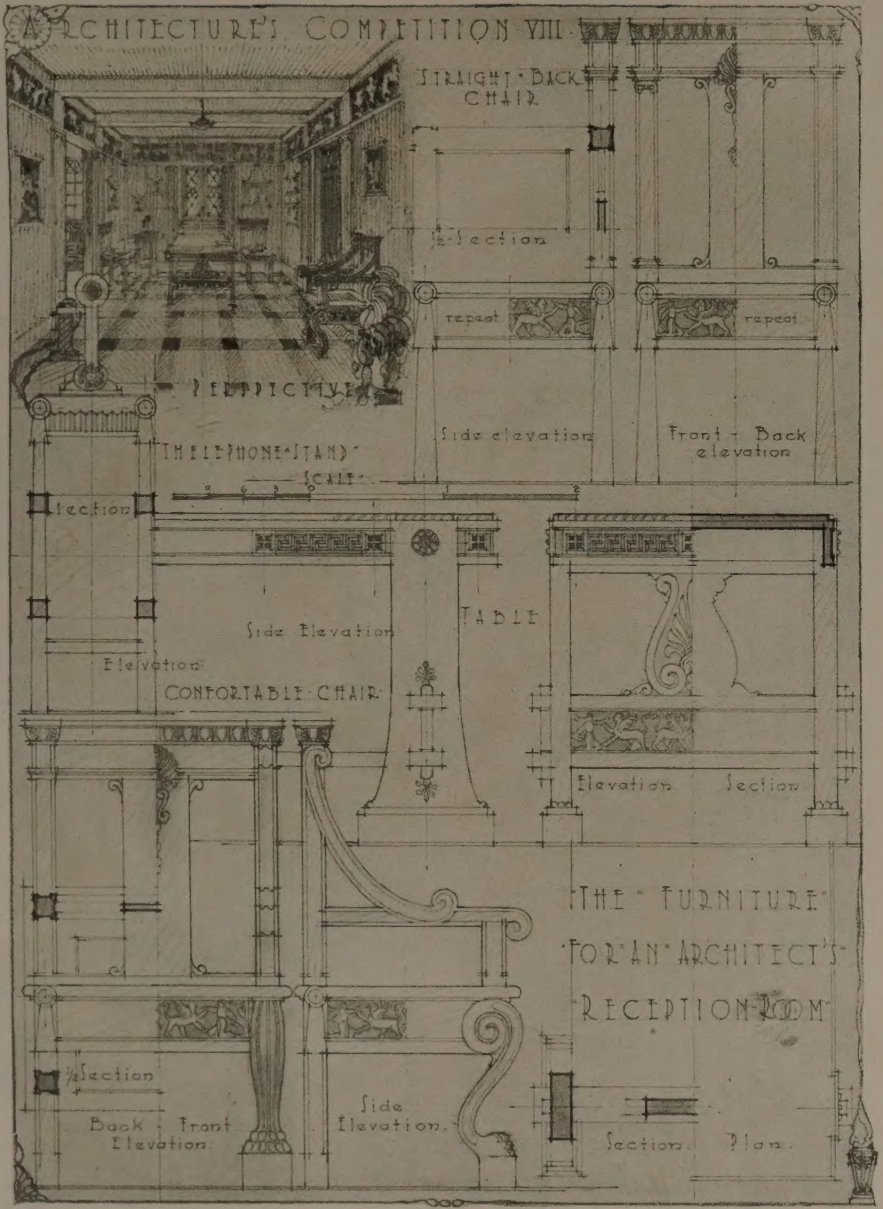
Once again, as the judges have remarked month after month, the lack of feeling for scale is one of the most common faults. There were many of the perspective sketches revealing a room specified as 10 by 15 feet, 8 feet high, as a great baronial hall.


An Architect's Reception Room.
Straight Back Chair.
Easy Chair
Note: All Upholstering of Leather
Telephone Stand
Half Plan Looking Up
Library Table
Plan at Table End Looking Up
Scale
9 6 0
·Architecture·Competition·No·VIII·

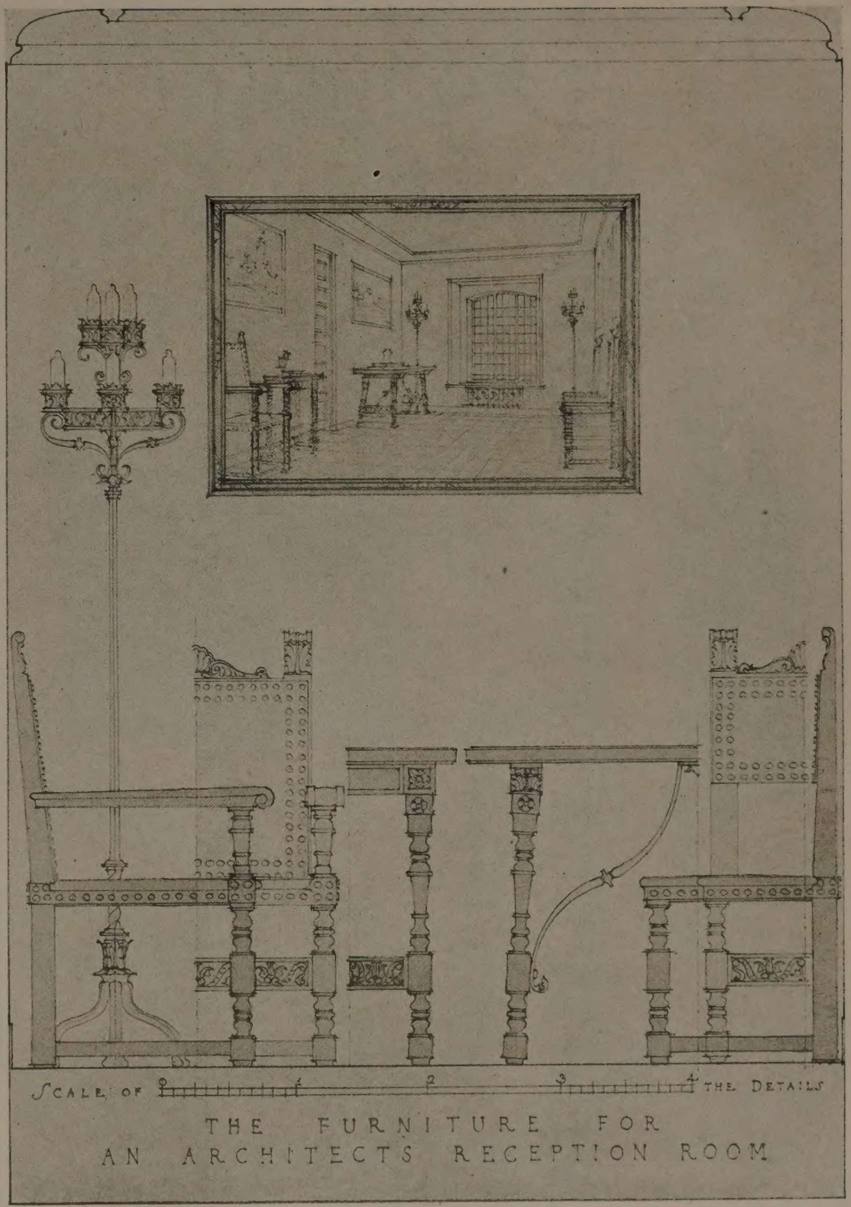
Second-Prize Design By Hilyard Robert Robinson, Washington, D. C.



Third-Prize Design By Samb Seiichi Washizuka, Detroit, Mich.



Fourth-Prize Design By Manuel Tapia Ruano, Havana, Cuba



Fifth-Prize Design By Thomas A. Cresswell, Chicago, Ills.

ARCHITECTURE'S COMPETITIONS

GENERAL CONDITIONS

Jury of Awards: H. Van Buren Magonigle, F. A. I. A., architect.

J. Monroe Hewlett, F. A. I. A., artist and architect.

Henry H. Saylor, Editor of ARCHITECTURE.

Compensation to Competitors: ARCHITECTURE will pay to the winners of each competition, immediately after receiving the jury's judgment, the following:

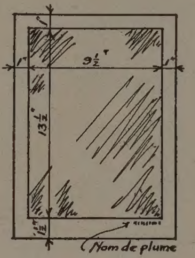
For Design placed First....	$150.00
" " " Second..	75.00
" " " Third...	30.00 in books*
" " " Fourth..	20.00 in books*
" " " Fifth...	10.00 in books*

*These to be chosen from the Art and Architectural Catalogue of Charles Scribner's Sons.

In addition to the above awards, which are made for each one of the monthly competitions, ARCHITECTURE will present three medals at the end of the twelfth competition, one of gold, one of silver, and one of bronze, to the three designs chosen from among the monthly winners which, in the opinion of the jury, show the greatest merit in design.

Eligibility: Architects, draftsmen, and students are invited to enter one or all of these monthly competitions. It is *not* necessary that a competitor be a subscriber to ARCHITECTURE. A competitor may submit one or more designs in any of these competitions, but not more than one prize will be awarded to a competitor in each.

Requirements: One sheet (paper, not cardboard) only is required for the presentation of each design. It must be exactly of the size indicated in the sketch diagram herewith, the border margins left blank excepting for the nom de plume or other identifying device. The drawing may be in line or wash, or both, but if in wash it should be in monochrome, preferably in India ink. Indicate all scales graphically. To preserve the anonymity of drawings, each is to be signed with a nom de plume which is also written upon the outside of a blank white envelope containing the competitor's name and address. Drawings may be sent flat or rolled, and are to be addressed "ARCHITECTURE, Competition No. ——, 597 Fifth Ave., New York, N. Y." The closing times given below are for receipt of entries at the office of ARCHITECTURE, rather than the closing by postmark date—this being necessary in order that judgments can be made and published in the following issue of the magazine. In justice to all, no questions regarding the competitions can be answered.



Drawings awarded prizes become the property of ARCHITECTURE for publication and for any other use at the publishers' discretion. Other drawings will be returned to the senders only if postage is included.

Programmes for Competitions X, XI, and XII

Competition X. Closing January 2, 1928, at noon.
Subject: The fireplace end of a living-room in a house adapted very simply and inexpensively from the Spanish. The width of the room is 15 feet; height, 9 feet to bottom of ceiling-beams. Show elevation of room end at ¾-inch scale; plan and section of fireplace, and any larger-scale details.

Competition XI. Closing February 1, 1928, at noon.
Subject: A gasoline and service station on the outskirts of a New England town. The property is a southeast corner, 100 feet square. Show plan of whole plot, two elevations, and a bird's-eye perspective.

Competition XII. Closing March 1, 1928, at noon.
Subject: Owner's bathroom in a country house. Size: 5½ x 8½ feet; 8 feet high. Entrance in middle of longer side, with window opposite. Use any material desired for floor and walls. Show elevation of window side of room and both ends at ¾-inch scale. Indicate general character of material (*not* by trade names) and color scheme.

CONTACTS

DEVOTED TO A BETTER UNDERSTANDING OF THE BUSINESS SIDE
OF ARCHITECTURE AND ITS RELATION TO THE INDUSTRIES

The Trade Association Fills the Gap

HOW THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION ACTS AS THE LIAISON BETWEEN THE ARCHITECT AND THE MANUFACTURER

By Charles F. Abbott

Executive Director, American Institute of Steel Construction

SPEAKING before the last annual convention of the American Institute of Steel Construction, Harvey Wiley Corbett delivered a plea for a better understanding between the architect and the engineer.

"I am willing to admit," said Mr. Corbett, "that without the engineer the buildings we erect would fall down, but I maintain that, without architects, the buildings we would erect ought to be taken down. The average architect still thinks of the engineer as a sort of hard-boiled egg, and I am sure that the average engineer thinks of the architect as a sort of soft-shelled crab."

Much the same feeling as that described by Mr. Corbett undoubtedly exists also between the architect and the manufacturer of building materials. The architect is sometimes too inclined to think of the manufacturer as a Philistine devoid of any sense of beauty, while the manufacturer frequently believes the architect to be an impractical dreamer who is never so happy as when specifying some specialty that will involve additional trouble and expense.

The architect and manufacturer are dependent upon each other to as great an extent as are the architect and engineer. In the long run, their interests are identical, and the trade association in the construction field has no more important function than that of interpreting the one to the other. Such a function must, however, be based upon something more than gestures and mutual love-fests. It must be solidly founded on service that works out to the practical advantage of both parties.

Accepting this as axiomatic, the American Institute of Steel Construction, the association of the structural-steel fabricators of the United States and Canada, has consistently endeavored to perform a real service for both the architect and the fabricator. Although the Institute is not yet seven years old, there is no question that it has succeeded in drawing these two elements more closely together than they have been in the past.

At the time of the Institute's organization there was no generally accepted specification governing the design, fabrication, and erection of structural steel. Municipal building codes differed greatly throughout the country. A design that met the requirements in one city might be taboo in a community a few miles away. As a consequence, the architect was forced to keep a library of building codes, and every design had to conform to the variations they demanded. That meant unnecessary work and expense for the architect, the fabricator, and the public.

The immediate necessity seemed to be for the formulation of standard practices to take the place of the diverse and largely rule-of-thumb methods that had been frozen into the building codes of the time. To accomplish this, the Institute appointed a committee, selected from the leaders in the architectural and engineering professions, to prepare a Standard Specification covering the manufacture and use of structural steel.

Up to the present time, over one hundred large cities in the United States and Canada have incorporated this Specification in their building codes, or have sanctioned its use. St. Louis, Mo., is the latest addition to the list. The Specification has been approved by the New York Building Congress, the Building Code Committee of the United States Department of Commerce, and the American Society of Railway Engineers.

The substitution of a working stress of 18,000 pounds per square inch for the old stress of 16,000 pounds—one of the most important provisions of the Specification—has been endorsed by the American Society of Civil Engineers.

Aside from the saving in the architect's time and labor, the Specification is tending to force all contracts into the hands of competent designers. With the adoption of standard engineering practices it is becoming more difficult for the irresponsible man to obtain an unfair advantage over a competitor by utilizing practices to which the responsible architect is unwilling to resort.

The preparation by the Institute of a Code of Standard Practice to govern the purchase and sale of structural steel is another step that has been of great benefit to the architect. Before the formulation of this Code, the architect, in calling for bids on the various iron and steel items, usually lumped all the items together.

But not all of the bidders were in a position to bid on every item. As a general rule, each bid received covered a different list. Even worse confusion was caused by the fact that a lack of any clear definition of the various items led to misunderstandings between the parties to the contract. It was frequently necessary to settle such misunderstandings by recourse to the courts.

The Institute's Code of Standard Practice classifies under four general heads all the iron or steel items that enter into the construction of a building. When the Code is made a part of the contract, it is unnecessary for the specification writer to list each item. He need only call for bids on the material under each of the general headings, and each bidder can bid on one or more classifications.

The Code also covers the questions of invoice weights, drawings and specifications, overrun, extra work, and inspection and delivery. The responsibility for delays is clearly defined.

At the present time each of the large rolling-mills issues its own handbook covering the use of its own structural shapes. As a result, it may prove necessary for the architect to dig into a half dozen volumes to get the information he needs. The Institute now has in preparation a Standard Handbook of Steel Construction that will incorporate, in tabulated form, data about the shapes produced by all of the mills.

Over 40,000 copies of this handbook, in preliminary editions, have already been distributed to architects, engineers, and the technical schools. The publication of the book in completed form will still further facilitate the work of the designer. It will make it unnecessary for each mill to spend thousands of dollars to publish its own handbook.

The Institute is convinced that the architect, in selecting the structural materials for a given project, is influenced not at all by vague or exaggerated statements concerning a material's merits. It believes that his selection of materials is determined by his knowledge of the service the materials will render, and by their adaptability to the requirements of the particular project. The Institute, therefore, is now issuing, in bulletin form, a sales manual of a new type for the use of the salesmen of its members.

The manual is designed to help the architect and save his time by furnishing the salesman with the specific information about structural steel that is of real interest to those charged with the selection of materials. Equipped with such data, the salesman is frequently in a position to be of considerable assistance to the architect. Along this same line, the Institute's Bureau of Architectural Relations and its corps of Field Engineers are prepared to co-operate with the architect in all matters relating to the use of steel for construction purposes.

While, up to this point, the emphasis has been placed upon the value to the architect of the Institute's activities, the benefits to the manufacturer—the fabricator of structural steel—are no less real and noteworthy.

Prior to the formulation of the Standard Specification for the design, fabrication, and erection of structural steel, the building code of practically every city forced the use of more steel than was really required for the job. By enabling steel to do all the work of which it is capable, the Specification saves approximately 10 per cent of the amount needed for a building, and thus places steel in a more favorable position in relation to competitive materials.

Standardization is making it possible for the fabricating plants to proceed in a uniform manner, without the necessity of juggling their practices to meet the innumerable variations required in the past. The elimination of causes of dispute reacts as greatly to the benefit of the seller as of the buyer. Sales methods, carefully adapted to the interests of those who determine the material to be used, inevitably lead to increased sales.

The public is the third party that benefits directly by the Institute's programme. Since building costs are reflected in taxes, rents, and prices, both wholesale and retail, any reduction in building costs is of direct interest to every member of the community.

It is conservatively estimated that the Standard Specification alone is effecting a saving of $30,000,000 in the nation's annual building bill. William Gompert, Superintendent of School Buildings for the City of New York, has stated that a saving in first costs of $540,000 would have resulted from the application of the Specification to the construction of the fifty school buildings contracted for by the city in 1924.

There must also be taken into consideration the annual interest charge on the capital tied up in unnecessary steel. In the case of the above school buildings, the interest charge amounts to $30,000 a year—and that charge endures to all eternity. It is easy to see that the elimination of such an interest charge has resulted in a tremendous saving for the communities in which the Specification is in use.

In conclusion, it should be stated that the Institute has always been opposed to any policy that would transfer the functions of the architect to the fabricating plant. The fabricator is a manufacturer who turns the shapes produced by the rolling-mills into structural material and erects the steel on the site of operations. He is not a designer, and should not be expected to act as such.

The architect has his essential functions and his particular problems. So has the fabricator.

It is the belief of the Institute that a clear understanding of each other's problems will aid each in living up to his obligations to the building owner and the general public.